Appendix A. Search Strategy

Appendix A. Search Strategy

MEDLINE®

Search	Most Recent Queries	Result
#1	Search "depressive disorder"[MeSH Terms] OR "depressive disorder"[tiab] OR "depression"[MeSH Terms]	127175
#2	Search "anxiety disorders"[MeSH Terms] OR "anxiety disorders"[tiab] OR "anxiety disorder"[tiab] OR "anxiety"[MeSH Terms]	101286
#3	Search #1 OR #2	203606
#4	Search #3 Limits: Humans, English	164381
#5	Search "arthritis"[MeSH Terms]	177086
#6	Search #4 AND #5	853
#7	Search "diabetes mellitus"[MeSH Terms] OR "diabetes"[tiab]	354545
#8	Search #4 AND #7	2313
#9	Search (chronic[tiab] AND "pain"[MeSH Terms]) OR "chronic pain"[tiab]	35695
#10	Search #4 AND #9	1988
#11	Search "cancer"[tiab]	813675
#12	Search #4 AND #11	4187
#13	Search "asthma"[MeSH Terms] OR "asthma"[tiab] OR "pulmonary disease, chronic obstructive"[MeSH Terms] OR “chronic obstructive pulmonary disease”[tiab] OR "COPD"[tiab]	142817
#14	Search #4 AND #13	1190
#15	Search "stroke"[MeSH Terms]	63078
#16	Search #4 AND #15	1050
#17	Search "HIV"[MeSH Terms]	69536
#18	Search #4 AND #17	111
#19	Search "heart failure"[MeSH Terms] OR "heart failure"[tiab]	113507
#20	Search #4 AND #19	669
#21	Search "myocardial ischaemia"[tiab] OR "myocardial ischemia"[MeSH Terms] OR "myocardial ischemia"[tiab]	320571
#22	Search #4 AND #21	2328
#23	Search "coronary artery bypass"[tiab] OR "CABG"[tiab]	28137
#24	Search #4 AND #23	246
#25	Search "status post" AND myocardial	29
#26	Search #4 AND #25	2
#27	Search "frail elderly"[MeSH Terms] OR "frail elderly"[All Fields]	5867
#28	Search #4 AND #27	280
#29	Search complex patient*	890
#30	Search #4 AND #29	10
#31	Search #6 OR #8 OR #10 OR #12 OR #14 OR #16 OR #18 OR #20 OR #22 OR #24 OR #26 OR #28 OR #30	14022
#32	Search "Intervention Studies"[MeSH Terms] OR intervention*[tiab]	409254
#33	Search "collaborative care"[tiab]	642
#34	Search "integrated treatment"[tiab] OR "clinical integration"[tiab] OR "integrated services"[tiab] OR "integrated care"[tiab] OR "integrated health care"[tiab]	2743
#35	Search "integrated"[tiab] and "behavioral model"[tiab]	16
#36	Search "service coordination"	105
#37	Search "chronic disease management"	711
#38	Search "coordinated care"	447
#39	Search #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38	412959
#40	Search #31 AND #39	2206
#41	Search ("Randomized Controlled Trial"[Publication Type] OR "Randomized Controlled Trials as Topic"[MeSH]) OR "Single-Blind Method"[MeSH] OR "Double-Blind Method"[MeSH] OR "Random Allocation"[MeSH]	446111
#42	Search #40 AND #41	598
#43	Search "meta-analysis"[Publication Type] OR "meta-analysis as topic"[MeSH Terms] OR "meta-analysis"[All Fields]	47698

Search	Most Recent Queries	Result
#44	Search #40 AND #43	39
#45	Search "review"[Publication Type] OR "review literature as topic"[MeSH Terms] OR "systematic review"[All Fields]	1604853
#46	Search #40 AND #45	379
#47	Search "Comparative Study"[Publication Type]	1512315
#48	Search #40 AND #47	234
#49	Search #42 OR #44 OR #46 OR #48	1078
#51	Search #40 Limits: Clinical Trial, Meta-Analysis, Randomized Controlled Trial, Clinical Trial, Phase I, Clinical Trial, Phase II, Clinical Trial, Phase III, Clinical Trial, Phase IV, Comparative Study, Evaluation Studies, Multicenter Study	870
#52	Search #49 OR #51	1235

Cochrane Library

ID	Search	Hits
#1	"depressive disorder"[MeSH Terms] OR "depressive disorder"[tiab] OR "depression"[MeSH Terms]	27842
#2	"anxiety disorders"[MeSH Terms] OR "anxiety disorders"[tiab] OR "anxiety disorder"[tiab] OR "anxiety"[MeSH Terms]	17159
#3	(#1 OR #2)	38401
#4	"arthritis"[MeSH Terms]	8026
#5	"diabetes mellitus"[MeSH Terms] OR "diabetes"[tiab]	21190
#6	(chronic[tiab] AND "pain"[MeSH Terms]) OR "chronic pain"[tiab]	7478
#7	"cancer"[tiab]	63095
#8	"asthma"[MeSH Terms] OR "asthma"[tiab] OR "pulmonary disease, chronic obstructive"[MeSH Terms] OR "chronic obstructive pulmonary disease"[tiab] OR "COPD"[tiab]	26210
#9	"stroke"[MeSH Terms]	25211
#10	"HIV"[MeSH Terms]	9517
#11	"heart failure"[MeSH Terms] OR "heart failure"[tiab]	9329
#12	"myocardial ischaemia"[tiab] OR "myocardial ischemia"[MeSH Terms] OR "myocardial ischemia"[tiab]	2932
#13	"coronary artery bypass"[tiab] OR "CABG"[tiab]	6474
#14	"status post" AND myocardial	5
#15	"frail elderly"[MeSH Terms] OR "frail elderly"[All Fields]	605
#16	(#4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15)	168623
#17	(#3 AND #16)	5834
#18	"Intervention Studies"[MeSH Terms]	2571
#19	"collaborative care"[tiab]	194
#20	"integrated treatment"[tiab] OR "clinical integration"[tiab] OR "integrated services"[tiab] OR "integrated care"[tiab] OR "integrated health care"[tiab]	291
#21	"integrated"[tiab] and "behavioral model"[tiab]	0
#22	"service coordination"	6
#23	"chronic disease management"	79
#24	"coordinated care"	43
#25	(#18 OR #19 OR #20 OR #21 OR #22 OR #23 OR #24)	3145
#26	(#17 AND #25)	209
#27	("Randomized Controlled Trial"[Publication Type] OR "Randomized Controlled Trials as Topic"[MeSH]) OR "Single-Blind Method"[MeSH] OR "Double-Blind Method"[MeSH] OR "Random Allocation"[MeSH]	341441
#28	"meta-analysis"[Publication Type] OR "meta-analysis as topic"[MeSH Terms] OR "meta-analysis"[All Fields]	17038
#29	"review"[Publication Type] OR "review literature as topic"[MeSH Terms] OR "systematic review"[All Fields]	94139
#30	"Comparative Study"[Publication Type]	135576
#31	(#27 OR #28 OR #29 OR #30)	438947
#32	(#26 AND #31)	204
#33	"Humans"[MeSH]	424963
#34	(#32 AND #33)	175

EMBASE

ID	Search	Results
1	**'anxiety disorder'**/exp OR **'anxiety'**/exp OR **'depression'**/exp	**382806**
2	**'arthritis'**/exp OR **'diabetes mellitus'**/exp OR **'chronic pain'**/exp OR **'neoplasm'**/exp OR **'asthma'**/exp OR **'chronic obstructive lung disease'**/exp OR **'stroke'**/exp OR **'human immunodeficiency virus'**/exp OR **'heart failure'**/exp OR **'heart muscle ischemia'**/exp OR **'coronary artery bypass graft'**/exp OR **'frail elderly'**/exp OR **'complex patient'** OR (**'status post'** AND **myocardial**)	**4346558**
3	**#1** AND **#2**	**43721**
4	**'intervention study'**/exp OR **'collaborative care'** OR **'integrated treatment'** OR **'clinical integration'** OR **'integrated services'** OR **'integrated health care'** OR **'integrated care'** OR **'integrated behavioral model'** OR **'patient care planning'**/exp	**43591**
5	**#3** AND **#4**	**354**
6	**#5** AND [humans]/lim AND [english]/lim AND ([embase]/lim OR [embase classic]/lim)	**250**

CINAHL® and PsycINFO®

#	Query	Last Run Via	Results
S1	(MH "Anxiety+") OR (MH "Anxiety Disorders+") OR (MH "Depression+") OR "depressive disorder"	Interface - EBSCOhost Search Screen - Advanced Search Database - PsycINFO;CINAHL with Full Text	60953
S2	(MH "Arthritis+") OR (MH "Chronic Pain") OR (MH "Neoplasms+") OR (MH "Diabetes Mellitus+") OR (MH "Asthma+") OR (MH "Pulmonary Disease, Chronic Obstructive+") OR (MH "Stroke") OR (MH "Human Immunodeficiency Virus+") OR (MH "Heart Failure+") OR (MH "Myocardial Ischemia+") OR (MH "Coronary Artery Bypass+") OR (MH "Frail Elderly") OR "frail elderly" OR “complex patient”	Interface - EBSCOhost Search Screen - Advanced Search Database - PsycINFO;CINAHL with Full Text	305296
S3	S1 and S2	Interface - EBSCOhost Search Screen - Advanced Search Database - PsycINFO;CINAHL with Full Text	6787
S4	"intervention studies" OR "collaborative care" OR "integrated treatment" OR "clinical integration" OR "integrated services" OR (MH "Health Care Delivery, Integrated") OR (MH "Integrative Medicine") OR "integrated care" OR "integrated behavioral model" OR "integratd health care" OR (MH "Patient Care")	Interface - EBSCOhost Search Screen - Advanced Search Database - PsycINFO;CINAHL with Full Text	17848
S5	S3 and S4	Interface - EBSCOhost Search Screen - Advanced Search Database - PsycINFO;CINAHL with Full Text	83

Total references identified by the main searches = 1,743

Hand searches of the following references yielded 111 articles:

Bower P, Gilbody S, Richards D, et al. Collaborative care for depression in primary care. Making sense of a complex intervention: systematic review and meta-regression. British Journal of Psychiatry. 2006(6):484-93. PMID: DARE-12006008459.

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Katon WJ, Seelig M. Population-based care of depression: team care approaches to improving outcomes. J Occup Environ Med. 2008 Apr;50(4):459-67. PMID: 18404019.

National Institute for Health and Clinical Excellence. National Clinical Practice Guideline Number 91: Depression in Adults with a Chronic Physical Health Problem: treatment and management. London: National Institute for Health and Clinical Excellence; 2009.

van der Feltz-Cornelis CM, Nuyen J, Stoop C, et al. Effect of interventions for major depressive disorder and significant depressive symptoms in patients with diabetes mellitus: a systematic review and meta-analysis. Gen Hosp Psychiatry. 2010 Jul-Aug;32(4):380-95. PMID: 20633742.

Total references from main searches and hand searches, minus duplicates = 1,693

Appendix B. Excluded Studies

Appendix B. List of Excluded Studies

Wrong language

Boni F, Corsonello A, Panuccio D. COPD and depression/anxiety ORIGINAL (NON-ENGLISH) TITLE BPCO e depressione/ansia. Italian Journal of Medicine. 2011 March;5(1 SUPPL. 1):S81-S90. PMID: 2011174126.

Hermanns N. Structured depression management in the therapy of comorbid depressive disorders in the case of diabetes ORIGINAL (NON-ENGLISH) TITLE Strukturiertes Depressionsmanagement in der Therapie komorbider depressiver Storungen bei Diabetes. Diabetologe. 2010 June;6(4):297-8. PMID: 2010481602.

Wrong publication type or study design

Adili F, Larijani B, Haghighatpanah M. Diabetic patients: Psychological aspects. Ann N Y Acad Sci. 2006 Nov;1084:329-49. PMID: 17151313.

Agius M, Zaman R, Klepacka K. Developing guidelines for the treatment of resistant unipolar depression across primary and secondary care. Journal of Cancer Education. 2009 2009;24 SUPPL. 1:S428-S9.

Anderson D, Horton C, O'Toole ML, et al. Integrating depression care with diabetes care in real-world settings: lessons from the Robert Wood Johnson Foundation Diabetes Initiative. Diabetes Spectrum. 2007 2007 Winter;20(1):10-6. PMID: 2009536867. Language: English. Entry Date: 20070511. Publication Type: journal article.

Antoni MH, Lutgendorf SK, Cole SW, et al. The influence of bio-behavioural factors on tumour biology: pathways and mechanisms. Nat Rev Cancer. 2006 Mar;6(3):240-8. PMID: 16498446.

Bartels SJ. Caring for the whole person: Integrated health care for older adults with severe mental illness and medical comorbidity. Journal of the American Geriatrics Society. 2004 December;52(SUPPL. 12):S249-S57. PMID: 2005542928 MEDLINE PMID 15541165 (http://www.ncbi.nlm.nih.gov/pubmed/15541165).

Bland P. Is collaborative care best for depression in chronic disease? The Practitioner. 2011 Jan;255(1736):5.

Block SD. Diagnosis and treatment of depression in patients with advanced illness. Epidemiol Psichiatr Soc. 2010 Apr-Jun;19(2):103-9. PMID: 20815292.

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Carlsen K, Jensen AB, Jacobsen E, et al. Psychosocial aspects of lung cancer. Lung Cancer. 2005 Mar;47(3):293-300. PMID: 15713512.

Carlson LE, Bultz BD. Benefits of psychosocial oncology care: improved quality of life and medical cost offset. Health Qual Life Outcomes. 2003;1:8. PMID: 12756059.

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Cole SA, Farber NC, Weiner JS, et al. Double-disease management or one care manager for two chronic conditions: pilot feasibility study of nurse telephonic disease management for depression and congestive heart failure. Dis Manag. 2006 Oct;9(5):266-76. PMID: 17044760.

Davidson MB, Echeverry D. Collaborative care for depression and chronic illnesses. N Engl J Med. 2011 Mar 31;364(13):1278; author reply -9. PMID: 21449795.

de Ridder D, Schreurs K. Developing interventions for chronically ill patients: is coping a helpful concept? (Structured abstract). Clinical Psychology Review; 2001. p. 205-40.

Dickens C, McGowan L, Percival C, et al. Depression is a risk factor for mortality after myocardial infarction: fact or artifact? J Am Coll Cardiol. 2007 May 8;49(18):1834-40. PMID: 17481442.

Dobscha SK, Corson K, Leibowitz RQ, et al. Rationale, design, and baseline findings from a randomized trial of collaborative care for chronic musculoskeletal pain in primary care. Pain Med. 2008 Nov;9(8):1050-64. PMID: 18565008.

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Handford C, Tynan A-M, Rackal Julia M, et al. Setting and organization of care for persons living with HIV/AIDS. Cochrane Database of Systematic Reviews. Chichester, UK: John Wiley & Sons, Ltd; 2006.

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Heron KE, Smyth JM. Ecological momentary interventions: incorporating mobile technology into psychosocial and health behaviour treatments. Br J Health Psychol. 2010 Feb;15(Pt 1):1-39. PMID: 19646331.

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Wrong PICOTS element(s)

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Allen M, Iezzoni LI, Huang A, et al. Improving patient-clinician communication about chronic conditions: description of an internet-based nurse E-coach intervention. Nurs Res. 2008 Mar-Apr;57(2):107-12. PMID: 18347482.

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Appendix C. Evidence Tables

Appendix C: Evidence Tables

Evidence Table 1. Characteristics of included studies[a]

Author, year Trial name Country Funding source	Sample sizes	Study design Level of randomization	Study setting	Study duration, mths
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	Randomized & analyzed: Overall: 55 G1: 28 G2: 27	RCT Patient	Primary care-like (oncology clinics)	8
Ell, 2008[2] ADAPt-C US Government	Randomized: Overall: 472 G1: 242 G2: 230 Analyzed @ 6 mths: G1: 166 G2: 152 Analyzed @ 12 mths: G1: 144 G2: 114	RCT Patient	Primary care-like (oncology clinic)	12
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	Randomized: Overall: 387 G1: 193 G2: 194 Analyzed @ 6 mths G1:151 G2:152 Analyzed @ 12 mths G1:142 G2:139 Analyzed @ 18 mths G1:144 G2:137	RCT Patient	1 traditional primary care; 1 primary care-referred (diabetes clinic)	18

Author, year Trial name Country Funding source	Sample sizes	Study design Level of randomization	Study setting	Study duration, mths
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	Randomized: Overall: 329 G1: 165 G2: 164 Analyzed: varied by outcome	RCT Patient	Traditional primary care	60 total
Katon, 2010[10] TEAMcare US Multiple sources	Randomized: Overall: 214 G1: 106 G2: 108 Analyzed @ baseline G1: 105 G2: 106 Analyzed @ 6 / 12 mths *Depression:* G1: 97 / 94 G2: 96 / 92 *HbA1c:* G1: 99 / 101 G2: 95 / 97 *SBP:* G1:103 / 101 G2:102 / 101	RCT Patient	Traditional primary care (GroupHealth)	12
Pyne, 2011[11] HITIDES US Government	Randomized: Overall: 276 G1: 138 G2: 138 Analyzed: G1: 123 G2: 126	RCT Patient	Primary care-like (HIV clinic)	12

Author, year Trial name Country Funding source	Sample sizes	Study design Level of randomization	Study setting	Study duration, mths
Rollman, 2009[12] Bypassing the Blues US Government	Randomized & analyzed: Overall: 302 G1: 150 G2: 152	RCT Patient	Unclear; telephone-based	8
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	Randomized: Overall: 200 G1: 101 G2: 99 Analyzed: G1: 98 G2:99	RCT Patient	Primary care-like (oncology clinics)	12
Vera, 2010[14] NA Puerto Rico Government	Randomized & analyzed: Overall: 179 G1: 89 G2: 90	RCT Patient	Traditional primary care	6
Lin, 2006[15] Lin, 2003[16] IMPACT: arthritis (secondary analyses) US Multiple sources	Randomized: Overall: 1,001 G1: 506 G2: 495 Analyzed @ 6 / 12 mths G1: 498 / 484 G2: 489 / 480	RCT Patient	Traditional primary care	24
Fann, 2009[17] IMPACT: cancer (secondary analyses) US Multiple sources	Randomized: Overall: 215 G1: 112 G2: 103 Analyzed @ 6 / 12 / 18 / 24 mths: G1: 107 / 101 / 99 / 97 G2: 100 / 94 / 90 / 86	RCT patient	Traditional primary care	24

Author, year Trial name Country Funding source	Sample sizes	Study design Level of randomization	Study setting	Study duration, mths
Williams, 2004[18] Katon, 2006[19] IMPACT: diabetes (secondary analyses) US Multiple sources	Randomized: Overall: 417 G1: 205 G2: 212 Analyzed @ 6 / 12 mths: G1: 201 / 193 G2: 202 / 200	RCT Patient	Traditional primary care	24

a G1 = intervention arm; G2 = control arm

Abbreviations: HbA1c, hemoglobin A1c; mths, months; RCT, randomized controlled trial; SBP, systolic blood pressure; US, United States

Evidence Table 2. Characteristics of study populations[a]

First author, year Trial name Country Funding source	MH condition MH inclusion criteria	CM condition(s) CM condition(s) inclusion criteria	Baseline age - mean (SD) Baseline % non-white Baseline % female	Baseline depression score	Baseline chronic condition measure
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	Depression MDD: PHQ-9 (cutoff NR); 3 items from PRIME-MD to assess dysthymia or persistent depressive symptoms at both baseline and 1 month later	Cancer <u>Women</u> ≥ 3 months past initial diagnosis w cervical cancer or stage I-IV breast cancer receiving care in outpatient breast and gynecology clinics	Overall: NR G1: 47.7 (11.9) G2: 46.8 (10.8) 96% of G1 and 85% of G2 were Spanish-only speakers. 100	PHQ-9, mean (SD) Overall: NR G1: 12.6 (7.0) G2: 13.4 (7.2)	NR
Ell, 2008[2] ADAPt-C US Government	Depression 1 of the 2 cardinal depression symptoms ≥ half of the days to nearly every day AND PHQ-9 score ≥ 10 and/or 2 items from the DSM-IV SCI indicating dysthymia	Cancer ≥90 days after cancer diagnosis and receiving acute or follow-up care in oncology clinics	Mean age: NR; N (%) age ≥50 years: Overall: 233 (49.4) G1: 117 (48.3) G2: 116 (50.4) % Hispanic Overall: 87.9 G1: 90.5 G2: 85.2 Overall: 84.5 G1: 83.5 G2: 85.7	PHQ-9, mean (SD) Overall: 13.09 (3.48) G1: 13.30 (3.51) G2: 12.87 (3.44) PHQ-9 ≥15, N(%) Overall: 139 (29.4) G1: 74 (30.6) G2: 65 (28.3)	Cancer Stage, N (%) Stage 0, I, II or unstaged Overall: 340 (72) G1: 174 (71.9) G2: 166 (72.2) Stage III, IV or recurrent Overall: 132 (28) G1: 68 (28.1) G2: 64 (27.8) Cancer treatment phase, N(%) Prior to treatment Overall: 52 (11) G1: 23 (9.5) G2: 29 (12.6) Acute treatment Overall: 193 (40.9) G1: 98 (40.5) G2: 95 (41.3) Follow-up care Overall: 227 (48.1) G1: 121 (50) G2: 106 (46.1)

First author, year Trial name Country Funding source	MH condition MH inclusion criteria	CM condition(s) CM condition(s) inclusion criteria	Baseline age - mean (SD) Baseline % non-white Baseline % female	Baseline depression score	Baseline chronic condition measure
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	Depression PHQ-9 score ≥10	Diabetes Medical chart indicates diabetes	Mean age NR; % ≥50 years: G1:75.1 G2:69.1 % Hispanic: Overall: 96.5 G1: 94.8 G2: 97.4 Overall: NR G1: 79.8 G2: 84.5	SCL-20, mean (SD) Overall: NR G1: 1.70 (0.73) G2: 1.41 (0.70)	HbAa1c, mean Overall: NR G1: 9.01% G2: 9.05% N (%) with HbAa1c ≥7% G1: 156 (83.0) G2: 153 (82.3) Whitty-9 Diabetes symptoms, mean (SD) G1: 2.33 (0.76) G2: 2.15 (0.75)
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	Depression PHQ-9 score >=10 AND SCL-90 or SCL-20 depression mean item score ≥ 1.1 two weeks later	Diabetes Diabetes registry that included patients with any of the following: 2 or more fasting glucose > 126 mg/dL; random plasma glucose level >200 mg/dL; current use of diabetic medication; inpatient or outpatient diagnosis of diabetes	Overall: 58.4 (11.8) G1: 58.6 (11.8) G2: 58.1 (12) % non-white: G1: 24.8 G2: 19.9 Overall: NR G1: 65.2 G2: 64.8	SCL-20, mean (SD) G1: 1.71 (0.51) G2: 1.63 (0.46)	HbA1C, mean (SD) G1: 8.0 ± 1.6 G2: 8.0 ± 1.5 Mean (SD) # of diabetic complications G1: 1.5 ± 1.3 G2: 1.5 ± 1.4

First author, year Trial name Country Funding source	MH condition MH inclusion criteria	CM condition(s) CM condition(s) inclusion criteria	Baseline age - mean (SD) Baseline % non-white Baseline % female	Baseline depression score	Baseline chronic condition measure
Katon, 2010[10] TEAMcare US Multiple sources	Depression PHQ-9 score ≥10	Diabetes and/or Heart disease ≥ of the following: HbA1c ≥ 8.5%; LDL cholesterol >130mg/dl; SBP >140mm Hg	Overall: NR G1: 57.4 (10.5) G2: 56.3 (12.1) % non-white: Overall: NR G1: 25 G2: 22 Overall: NR G1: 48 G2: 56	PHQ-9, mean (SD) Overall: NR G1: 14.7 (3.8) G2: 13.9 (3.1) SCL-20, mean (SD) Overall: NR G1: 1.7 (0.6) G2: 1.7 (0.6)	HbAa1c, mean (SD) Overall: NR G1: 8.1 (2.0) G2: 8.0 (1.9) LDL cholesterol, mean (SD) Overall: NR G1: 106.5 (35.3) mg/dl G2: 109.0 (36.5) mg/dl SBP, mean (SD) Overall: NR G1: 136 (18.4) mm Hg G2: 132 (17.2) mm Hg % with diabetes (with or without heart disease) Overall: NR G1: 89% G2: 82% % with coronary heart disease Overall: NR G1: 23% G2: 30%

First author, year Trial name Country Funding source	MH condition MH inclusion criteria	CM condition(s) CM condition(s) inclusion criteria	Baseline age - mean (SD) Baseline % non-white Baseline % female	Baseline depression score	Baseline chronic condition measure
Pyne, 2011[11] HITIDES US Government	Depression PHQ-9 ≥10	HIV/AIDS Veterans being treated in the VA HIV clinic	Overall: NR G1: 49.8 (8.7) G2: 49.8 (10.5) % non-white: Overall: NR G1: 63.4 G2: 61.6 Overall: NR G1: 2.4 G2: 3.2	PHQ-9, mean (SD) Overall: NR G1: 15.7 (4.2) G2: 16.0 (4.7) SCL-20, mean (SD) Overall: NR G1: 1.8 (0.6) G2: 1.9 (0.7)	Mean (SD) # of bothersome HIV symptoms Overall: NR G1: 7.8 (4.1) G2: 8.0 (4.3) Current anti-HIV prescription, N (%) G1: 99 (80.5) G2: 99 (78.6) % (SD) adherent to anti-HIV medication G1: 93.5 (16.2) G2: 91.2 (20.1)
Rollman, 2009[12] Bypassing the Blues US Government	Depression PHQ-9 score ≥11	Heart disease Post-CABG patients	Overall: NR G1: 64 (10.8) G2: 64 (11.2) % non-white: Overall: NR G1: 12 G2: 7 Overall: NR G1: 46 G2: 37	PHQ-9, mean (SD) Overall: NR G1: 13.5 (3.2) G2: 13.6 (3.6) HRSD, mean(SD) Overall: NR G1: 16.5 (7.1) G2: 15.9 (6.9)	Duke Activity Status Index, mean (SD) Overall: NR G1:7.1 (5.8) G2: 7.7 (7.6)

First author, year Trial name Country Funding source	MH condition MH inclusion criteria	CM condition(s) CM condition(s) inclusion criteria	Baseline age - mean (SD) Baseline % non-white Baseline % female	Baseline depression score	Baseline chronic condition measure
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	Depression HADS ≥15 AND MDD dx by DSM-IV SCI AND SCL-20 depression scale ≥1.75 AND MDD of ≥ 1 month's duration that was not associated w major changes in patient's cancer or its management	Cancer Cancer with prognosis of ≥6 months	Overall: NR G1: 56.6 (11.4) G2: 56.6 (11.4) NR Overall: NR G1: 69 G2: 72	SCL-20, median (IQR) Overall: NR G1: 2.35 (2.05 to 2.75) G2: 2.25 (1.95 to 2.75)	Mths since most recent cancer diagnosis / recurrence / metastases; median (IQR) Overall: NR G1: 13 (5.5-33.7) G2: 20 (9.1-44.7) N (%) disease-free / local disease / metastatic disease G1: 65 (64) / 20 (20), /16 (16) G2: 67 (68) / 22 (22) / 10 (10) N (%) pre-treatment / under investigation / active treatment / post-treatment assessment / monitoring G1: 0 (0) / 4 (4) / 19 (19) / 2 (2) / 76 (75) G2: 2 (2) / 15 (15) / 15 (15) / 3 (3) / 64 (65) N (%) no active treatment / chemotherapy / radiotherapy / both G1: 82 (81) / 9 (9) / 7 (7) / 3 (3) G2: 84 (85) / 10 (10) / 3 (3) / 2 (2)
Vera, 2010[14] NA Puerto Rico Government	Depression PHQ-9 score (cutoff NR) AND mean SCL-20 score >1.0 over 2 week screening period	Spanish speakers with ≥1 of the following: diabetes, hypothyroidism, asthma, hypertension, chronic bronchitis, arthritis, heart disease, high cholesterol, stroke	Overall: 55.2 (12.6) G1: 57.0 (12.4) G2: 53.5 (12.7) 100% Puerto Rican Overall: 76 G1: 74 G2: 78	SCL-20, mean (SD) Overall: 2.28 (0.56) G1: 2.22 (5.4) G2: 2.34 (0.58)	Mean (SD) # active medical conditions Overall: 2.54 (1.39) G1: 2.58 (1.40) G2: 2.49 (1.38)

First author, year Trial name Country Funding source	MH condition MH inclusion criteria	CM condition(s) CM condition(s) inclusion criteria	Baseline age - mean (SD) Baseline % non-white Baseline % female	Baseline depression score	Baseline chronic condition measure
Lin, 2006[15] Lin, 2003[16] IMPACT: arthritis (secondary analyses) US Multiple sources	Depression DSM-IV current Major Depression and/or dysthymia	Arthritis <u>Older adults (≥60)</u> Self-reported arthritis, confirmed in 91.4% via physician diagnosis, radiographic evidence, specialty consultation;	Mean (SE) Overall: 72.0 (7.4) G1: 71.9 (7.3) G2: 72.1 (7.5) % Non-White (% Black / % Hispanic / % Other) Overall: 24 (13 / 8 / 3) G1: 23 (13 / 7 / 3) G2: 25 (13 / 10 / 2) Overall: 68.3 G1: 67 G2:70	Overall: 1.7 (0.6) G1: NR G2: NR	Arthritis pain intensity (range 0-10), mean (SD) Overall: 6.1 (2.7) G1: 6.0 (2.7) G2: 6.3 (2.7) Arthritis interference (range 0-10), mean (SD) Overall: 4.9 (3.2) G1: 4.9 (3.1) G2: 5.0 (3.2) Pain interference (range 1-5), mean (SD) Overall: 3.2 (1.1) G1: 3.2 (1.1) G2: 3.2 (1.1)
Fann, 2009[17] IMPACT: cancer (secondary analyses) US Multiple sources	Depression DSM-IV current Major Depression and/or dysthymia	Cancer <u>Older adults (≥60)</u> ICD-9 diagnosis of non-skin cancer in claims or encounter data in the year before or the year following randomization	Mean (SE) Overall: 71.75 (0.50) G1: 71.73 (0.70) G2: 71.78 (0.71) % Non-White Overall: 25 G1: 22 G2: 27 Overall:60 G1: 63 G2: 58	Overall: 1.62 (0.04) G1: 1.65 (0.06) G2: 1.59(0.06)	Type (%), overall sample Female breast (29) Male reproductive (23) occult (13) digestive system (12) urinary system (10) hematologic (10) female reproductive (9) respiratory system (7) other (8)

First author, year Trial name Country Funding source	MH condition MH inclusion criteria	CM condition(s) CM condition(s) inclusion criteria	Baseline age - mean (SD) Baseline % non-white Baseline % female	Baseline depression score	Baseline chronic condition measure
Williams, 2004[18] Katon, 2006[19] IMPACT: diabetes (secondary analyses) US Multiple sources	Depression DSM-IV current Major Depression and/or dysthymia	Diabetes <u>Older adults (≥60)</u> Positive response to "Has a doctor or another health care worker diagnosed you with or treated you for high blood sugar or diabetes in the past 3 years?"	Overall: NR G1:70.1 (6.9) G2: 70.3 (7.1) % Non-White (% Black / % Hispanic / % Other) Overall: NR G1: 35 (22 / 10 / 3) G2: 37 (18 / 16 / 3) Overall: NR G1: 54 G2: 53	Overall: NR G1: 1.67 (0.62) G2: 1.72 (0.63)	HbA1c (%) Overall: 7.3 (0.1) G1: 7.3 (1.3) G2: 7.3 (1.5)

a G1 = intervention arm; G2 = control arm

Abbreviations: CABG, coronary artery bypass graft; CM, chronic medical; dL, deciliter; DSM, Diagnostic and Statistical Manual of Mental Disorders; HADS, Hospital Anxiety and Depression Scale; HbA1c, hemoglobin A1c; HRSD; Hamilton Rating Scale for Depression; ICD, International Classification of Diseases; IQR, interquartile range; LDL, low density lipoprotein; MDD, major depressive disorder, MH, mental health; mg, milligrams; mths, months; NR, not reported; PHQ, Patient Health Questionnaire; RCT, randomized controlled trial; SBP, systolic blood pressure; SCI, structured clinical interview; SCL, Symptom Checklist; SD, standard deviation; SE, standard error; US, United States; VA, Veterans' Affairs

Evidence Table 3. Intervention components

First author, year Trial name Country Funding source	Components of collaborative care intervention	Type of control condition	Components of control condition
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	Access to a CDCS who provided manualized psychotherapy (problem solving therapy), supported antidepressant medication adherence, and assisted with systems navigation; Education about and choice of problem-solving therapy or medication as first-line treatment; Treatment plan put in medical chart; feedback given to oncologist; PST included weekly sessions for 8 weeks with additional sessions or addition of medication for non-responders after evaluation by study psychiatrist; Medication for 8 weeks with adjustments available after for non-responders	Usual care	Patients were informed of their depression diagnosis and the usual mental health resources available to them at clinic system. Recruiters suggested that they talk with their PCP or the clinic social worker. Recruiters placed a note in the patient's medical record indicating the presence of depressive symptoms.
Ell, 2008[2] ADAPt-C US Government	Access to a CDCS who offered education, structured psychotherapy, and maintenance / relapse prevention and outcomes monitoring; Depression- and cancer-related community services navigation by the CDCS or a patient navigator under CDCS direction; Psychiatrist who supervised the CDCS and prescribed antidepressants; Personalized treatment plan that included medication or PST; Structured algorithm for stepped care management and protocol for PST	Enhanced usual care	Standard oncology care plus: Patient/family depression and cancer education pamphlets and a listing of financial, social services, transporation, and childcare resources; Treating oncologist was informed of patients' depression status.

First author, year Trial name Country Funding source	Components of collaborative care intervention	Type of control condition	Components of control condition
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	Socioculturally-enhanced structured stepped-care algorithm with problem solving and/or medication; Monthly phone consult with diabetes specialist for relapse prevention and symptom monitoring; Care and service system navigation	Enhanced usual care	Standard clinic care plus: Patient- and family-focused depression education pamphlets plus community resource lists (e.g., social services, transportation, childcare)
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	Individualized, stepped-care depression treatment program provided by a depression clinical specialist nurse; Education about depression, behavioral activation (i.e., increasing positive activities such as exercise) Choice of first-line treatment: medication or PST;	Enhanced usual care	PCPs were notified about the patient's depression diagnosis; Patients were advised to consult with their physicians about depression.
Katon, 2010[10] TEAMcare US Multiple sources	Personalized care plan and treat-to-target adjustments; Nurses monitored progress and support for medication adherence; Problem solving and goal setting using motivational coaching; Self-care materials related to depression and chronic disease management; Maintenance plan development and follow-up phone calls by nurse every 4 weeks	Enhanced usual care	Patients were advised to consult PCP to treat MH and chronic condition; Depression and lab results shared with PCP with patients' permission

First author, year Trial name Country Funding source	Components of collaborative care intervention	Type of control condition	Components of control condition
Pyne, 2011[11] HITIDES US Government	Depression care team consisted of DCM, clinical pharmacist, and psychiatrist; Education and activation, assessment of treatment barriers and possible resolutions, depression symptom and treatment monitoring, substance abuse monitoring, and instruction in self-management (e.g., encouraging patients to exercise and participate in social activities); Stepped-care model for depression treatment: watchful waiting; depression care team suggestions for treatment; medication suggestions from team pharmacist; combination medication and specialty MH counseling; referral to specialty MH	Usual care	Patients delivered depression screening results to their HIV clinicians.
Rollman, 2009[12] Bypassing the Blues US Government	Nurse care manager provided basic depression psychoeducation including treatment options (e.g., workbook to enhance self-care; start or adjust antidepressant medication via PCP; watchful waiting for mild symptoms; referral to MH specialist); Weekly case review and report of treatment recommendations to patient and to PCP	Usual care	Patients and PCPs were informed of depression status.
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	Usual care + manual-based, cancer nurse-delivered complex intervention called Depression Care for People with Cancer: Education about depression and its treatment (including antidepressant medication); PST to teach coping strategies designed to overcome feelings of hopelessness; Communication about management of depression with each patient's oncologist and PCP; PCP prescribed all medication.	Usual care	Patients' PCPs and oncologists were informed of diagnosis of depression and were given advice on choice of antidepressant drug, if requested

First author, year Trial name Country Funding source	Components of collaborative care intervention	Type of control condition	Components of control condition
Vera, 2010[14] NA Puerto Rico Government	Multicomponent, included program oversight and teamwork among PCPs, MH care specialists and DCMs. Depression education, choice of evidence-based treatment options: medication or 13-session CBT; DCM participated in coordination of treatment initiation and monitoring of adherence, side effects and clinical response. DCM consulted with psychiatrist regarding treatment and forwarded psychiatrist recommendations to PCP.	Usual care	Patients were informed of depression diagnosis and available MH resources; Patients were encouraged to discuss depression with PCP; Note was placed in medical record.
Williams, 2004[18] Fann, 2009[17] Lin, 2006[15] Katon, 2006[19] Lin, 2003[16] IMPACT (secondary analyses) US Multiple sources	DCM (nurse or clinical psychologist) worked with patient and PCP; Education and behavioral activation planning; Identifying treatment preferences: structured 6-8 session PST and/or stepped-care algorithm medication prescribed by PCP	Usual care	Routinely available depression treatment in primary care

Abbreviations: CBT, Cognitive-Behavioral Therapy; CDCS, Cancer Depression Clinical Specialist; DCM, Depression Care Manager; MH, mental health; PCP, primary care provider; PST, Problem-Solving Treatment; US, United States

Evidence Table 4. Intervention logistics

First author, year Trial name Country Funding source	Research staff or clinic staff; Name given to interventionist; Intervention provider type	Intervention delivery mechanism	Description of intervention contacts Length of intervention contacts Length of time over which intervention was delivered
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	Research staff: Cancer / Depression Clinical Specialist Social worker	In-person & phone	PST sessions weekly for 8 weeks minimum; Phone follow-up every 2 weeks NR ≥8 wks
Ell, 2008[2] ADAPt-C US Government	Research staff Social worker	In-person & phone	Initial visit + the following, based on treatment selected: Medication only: NR (mean 5.6 months on medication) PST only: mean (SD) 7.7 (5.5) sessions Medication + PST: mean (SD) 11 (9.8) sessions # phone contacts NR NR ≤12 mths
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	Unclear: Diabetes / Depression Clinical Specialist Social worker	In-person with phone follow-up	Varied: Acute phase: weekly Maintenance: monthly PST participants had a mean (SD) of 8.7 (5.4) sessions 90 mins per pt visit; 45 mins per phone follow-up; 10-15 mins per patient navigation call 12 mths

First author, year Trial name Country Funding source	Research staff or clinic staff; Name given to interventionist; Intervention provider type	Intervention delivery mechanism	Description of intervention contacts Length of intervention contacts Length of time over which intervention was delivered
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	Research staff: Depression Care Manager Nurse	In-person & phone	Acute phase (enrollment through response or 12 wks): twice-monthly contact; additional for non-responders; Continuation phase (after response achieved): once-monthly phone contact (up to the 12-month time point) initial 1-hour visit; acute-phase: 30 mins; continuation phase: NR 12 mths
Katon, 2010[10] TEAMcare US Multiple sources	Unclear: "Study nurse" Nurse	In-person with phone follow-up	In-person visits "every 2-3 weeks;" phone follow-ups every 4 wks after achievement of relevant target measures. 30 mins in-person; 10-15 mins phone (mean = 10.0 mins in person and 10.8 mins phone) 12 mths
Pyne, 2011[11] HITIDES US Government	Research Staff: HIV Depression Care Team Nurse	Phone	DCM monitoring call every 2 wks during acute treatment and every 4 wks after (for 2 mths after remission or 6 mths after response); Mean number of DCM intervention phone contacts per patient during the acute and continuation phases of treatment = 7.2 (SD, 4.5; range, 0-19) NR Varied
Rollman, 2009[12] Bypassing the Blues US Government	Research staff Nurse	Phone	Median = 10 (range 0 to 28): 8 to 12 (biweekly for initial 2 to 4 mths followed by contact every 1 to 2 mths for the next 4 mths) 15 to 45 mins 8 mths

First author, year Trial name Country Funding source	Research staff or clinic staff; Name given to interventionist; Intervention provider type	Intervention delivery mechanism	Description of intervention contacts Length of intervention contacts Length of time over which intervention was delivered
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	Unclear Nurse	In-person & phone	Maximum of 10 sessions over first 3 mths with "booster" sessions available during mths 3-6 if PHQ-9 scores worsened; Mean: 7; range 2-10 during first 3 mths 45 mins Majority during first 3 mths; booster during 3-6 mths if needed
Vera, 2010[14] NA Puerto Rico Government	Research Staff: Care Manager Counselor or psychologist	In-person & phone	Mean 1.4 (range 0-6) in-person contacts with care manager and 8.2 (0-23) phone contacts. Mean = 11.7 mins (range 4.3 to 34.5) NR
Williams, 2004[18] Fann, 2009[17] Lin, 2006[15] Katon, 2006[19] Lin, 2003[16] IMPACT (secondary analyses) US Multiple sources	Research staff: Depression clinician specialist Nurse or psychologist	In-person & phone	6-8 patient visits + 12-18 follow-up calls or brief visits; PST visits, mean (SD): Overall: 6.34 (4.26) G1/G2: NR In-person visits, mean (SD): Overall: 9.15 (6.17) G1/G2: NR Phone contacts, mean (SD): Overall: 6.10 (5.13) G1/G2: NR NR 12 mths

Abbreviations: DCM, Depression Care Manager; mins, minutes; mths, months; NR, not reported; PST, Problem-Solving Treatment; SD, standard deviation; US, United States; wks, weeks

Evidence Table 5. Mental health outcomes: symptom improvement, response rate, remission and/or recurrence[a]

First author, year Trial name Country Funding source	MH symptom improvement	MH response rate	M H remission and/or recurrence
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	**N (%) with improved PHQ-9** *@ 8 mths* G1: 20 (74) G2: 12 (46) OR (95% CI) = 3.33 (1.05 to 10.59); p=0.04	**N (%) achieving ≥50% reduction in PHQ-9** *@ 8 mths* G1: 10 (37) G2: 3 (12) OR (95% CI): 4.51 (1.07 to 18.93); p=0.03	NR
Ell, 2008[2] ADAPt-C US Government	**Adj PHQ-9 score, mean (SE)** *@ 6 mths* G1: 7.34 (0.34) G2: 8.14 (0.34) adj mean between-group difference (95% CI): -0.8 (-1.7 to 0.11); p = 0.08 *@ 12 mths* G1: 6.4 (0.36) G2: 7.14 (0.39) 12-month between-group difference (95% CI): -0.74 (-1.74 to 0.27); p = 0.15 Change in mean PHQ-9 scores across time between groups p=0.06	**N (%) achieving ≥50% reduction in PHQ-9** *@ 6 mths* G1: 82 (49.4) G2: 63 (41.4) OR (95% CI): 1.26 (0.79 to 2.02); p = 0.33 *@ 12 mths* G1: 91 (63.2) G2: 57 (50.0) OR (95% CI): 1.98 (1.16 to 3.38); p = 0.01 Adjusted OR (95% CI): 1.92 (1.14 to 3.26) **N (%) achieving 5-point decrease in PHQ-9** *@ 6 mths* G1: 102 (61.5) G2: 76 (50.0) OR (95% CI): 1.45 (0.90 to 2.33); p = 0.13 *@ 12 mths* G1: 104 (72.2) G2: 68 (59.7) OR (95% CI): 1.99 (1.14 to 3.50); p = 0.02 Adjusted OR (95% CI): 1.99 (1.14 to 3.50); p=0.02	**Of G1 patients:** **N (%) experiencing remission** *@ 6 mths* G1: 80 (70) **Of G1 patients achieving remission:** **N (%) experiencing relapse** *between 6 and 12 mths* G1: 16 (14) **N (%) continuing to respond** *between 6 and 12 mths* G1: 19 (17)

First author, year Trial name Country Funding source	MH symptom improvement	MH response rate	M H remission and/or recurrence
Ell, 2010[3]	NR	**N (%) achieving ≥50% reduction in SCL-20**	**N (%) achieving SCL-20 < 0.5**
		@ 6 mths	*@ 6 mths*
Multifaceted		G1: 86 (57.0)	G1: 58 (38.4)
Diabetes and		G2: 55 (36.4)	G2: 42 (27.8)
Depression		p < 0.001	p = 0.01
Program		*@ 12 mths*	*@ 12 mths*
		G1: 88 (62.0)	G1: 56 (39.4)
US		G2: 59 (42.4)	G2: 49 (35.3)
		p < 0.001	p = 0.09
Government		*@ 18 mths*	*@ 18 mths*
		G1: 89 (61.8)	G1: 58 (40.3)
		G2: 60 (43.8)	G2: 48 (35.0)
		p < 0.001	p = 0.04

First author, year Trial name Country Funding source	MH symptom improvement	MH response rate	M H remission and/or recurrence
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	**Improvement on SCL-90** *@ 6 mths* G1 scores lower than G2; p=0.04 change (95% CI) from BL to 6 mo: G1: -0.56 (-0.46 to -0.67) G2: -0.39 (-0.28 to -0.49) *@ 12 mths* G1 scores lower than G2, p=0.03 change (95% CI) from BL to 12 mths: G1: -0.65 (-0.54 to -0.76) G2: -0.44 (-0.33 to -0.56) **SCL-90 score** *@ 24 mths* G1: 1.10 G2: 1.22 P=0.048 **N (%) showing improvement on PGI** *@ 6 mths* G1: 100 (69.4) G2: 59 (39.3) OR (95% CI): 3.50 (2.16 to 5.68) *@ 12 mths* G1: 105 (71.9) G2: 60 (42.3) OR (95% CI): 3.50 (2.14 to 5.72) **Mean (SD) depression-free days** *BL through 12 mths* G1: 186 (97) G2: 166 (97) Difference (95% CI)= +20 (−2 to 42) *Mth 12 through mth 24* G1: 226 (118) G2: 193 (117) Difference (95% CI)=+33 (5 to 61) *BL through 24 mo* G1: 412 (202) G2: 359 (207) Difference (95% CI)=+53 (0 to 97) Also reported as: Difference (95% CI) = +61 (11 to 82)	**N (%) achieving ≥40% reduction in SCL-90** *@ 6 mths* G1: 61 (42.4) G2: 51 (34.2) OR (95% CI): 1.40 (0.87 to 2.25) *@ 12 mths* G1: 79 (54.1) G2: 54 (38.0) OR (95% CI): 1.89 (1.18 to 3.02) **N (%) achieving ≥50% reduction in SCL-90** *@ 6 mths* G1: 53 (36.8) G2: 39 (26.2) OR (95% CI): 1.62 (0.98 to 2.67) *@ 12 mths* G1: 60 (41.1) G2: 45 (31.7) OR (95% CI): 1.47 (0.90 to 2.39)	NR

First author, year Trial name Country Funding source	MH symptom improvement	MH response rate	M H remission and/or recurrence
Katon, 2010[10] TEAMcare US Multiple sources	**SCL-20, mean (SD)** *@ 6 months* G1: 0.84 (0.68) G2: 1.26 (0.72) G1 Change from baseline to 6 mths: -0.90 G2 Change from baseline to 6 mths: -0.39 *@ 12 mths* G1: 0.83 (0.68) G2: 1.14 (0.66) G1 Change from baseline to 12 mths: -0.91 G2 Change from baseline to 12 mths: -0.51 12-month between-group difference (95% CI): -0.41 (-0.56 to -0.26) p < 0.001 **N (%) with improvement on PGI** *@6 mths* G1: 64 (67) G2: 15 (16) *@12 mths* G1: 41 (45) G2: 16 (18) Between-group change over time, p < 0.001	**N (%) with ≥ 50% decrease in SCL-20** *@ 6 mths* G1: 57 (59) G2: 22 (23) *@ 12 mths* G1: 56 (60) G2: 28 (30) Between-group change over time, p < 0.001	NR

First author, year Trial name Country Funding source	MH symptom improvement	MH response rate	M H remission and/or recurrence
Pyne, 2011[11]	Unadjusted SCL-20 scores were not significantly different between the intervention and usual care groups at the 6- or 12-month follow-up	**N (%) achieving ≥50% decrease in SCL-20** *@ 6 mths* G1: 41 (33.3) G2: 22 (17.5) Unadjusted OR (95% CI) 2.50 (1.37 to 4.56); p= 0.004 Adjusted OR (95% CI) 2.60 (1.39 to 4.86); p=0.003 *@ 12 mths* G1: 49 (39.8) G2: 41 (32.5) Unadjusted OR (95% CI) 1.37 (0.78 to 2.41); p=NS Adjusted OR (95% CI) 1.29 (0.72 to 2.32); p=0.39	**N (%) achieving SCL-20 < 0.5** *@ 6 mths* G1: 27 (22.0) G2: 15 (11.9) Unadjusted OR (95% CI): 2.25 (1.11 to 4.54) ; p=0.03 Adjusted OR (95% CI): 2.40 (1.10 to 5.22); p = 0.03 *@ 12 mths* G1: 28 (22.8) G2: 21 (16.7) Unadjusted OR (95% CI): 1.52 (0.78 to 2.98) ; p=NS Adjusted OR (95% CI): 1.36 (0.66 to 2.88); p = 0.40
HITIDES US Government	**Change in depression-free days, from baseline to 12 mths** G1: +147.3 G2: +120.0 Effect size = 0.3; p=0.04 Adjusted mean group diff, Beta (95% CI) = +19.3 (10.9 to 27.6); p<0.001		

First author, year Trial name Country Funding source	MH symptom improvement	MH response rate	M H remission and/or recurrence
Rollman, 2009[12] Bypassing the Blues US Government	**$HRSD_{17}$ mean (SE)** FULL SAMPLE *@ 8 mths* G1: 9.0 (0.7) G2: 11.4 (0.7) *Change from baseline @ 8 mths:* G1: - 7.6 (0.6) G2: - 4.5 (0.6) Between-group difference (95% CI): 3.1 (1.3 to 4.9), p = 0.001 Effect Size (95% CI): 0.30 (0.08 to 0.53), p = 0.009 MEN ONLY *@ 8 mths* G1: 7.8 (0.9) G2: 10.9 (0.8) *Change from baseline @ 8 months:* G1: - 7.9 (0.8) G2: - 4.9 (0.8) Between-group difference (95% CI): 3.0 (0.8 to 5.3), p = 0.009 Effect Size (95% CI): 0.39 (0.09 to 0.69), p = 0.01 WOMEN ONLY *@ 8 mths* G1: 10.2 (1.0) G2: 12.0 (1.1) *Change from baseline @ 8 months:* G1: - 7.4 (0.9) G2: - 4.2 (1.0) Between-group difference (95% CI): 3.2 (0.5 to 5.9), p = 0.02 Effect Size (95% CI): 0.23 (-0.13 to 0.59), p = 0.20	**N (%) achieving 50% reduction in $HRSD_{17}$** *@ 8 mths* G1: 75 (50.0) G2: 45 (29.6) Effect size (95% CI): 0.42 (0.19 to 0.65), p < 0.001 MEN ONLY G1: 60.5% G2: 33.3% Effect size (95% CI): 0.55 (0.26 to 0.85), p < 0.001 WOMEN ONLY G1: 37.7% G2: 23.2% Effect size (95% CI): 0.32 (-0.04 to 0.67), p = 0.08	NR

First author, year Trial name Country Funding source	MH symptom improvement	MH response rate	M H remission and/or recurrence
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	**SCL-20, mean (SD)** *@ 6 mths* G1: 1.03 (0.79) G2: 1.51 (0.81) Adj mean diff (95% CI): -0.59 (-0.81 to -0.37) *@ 12 mths* G1: 1.12 (0.89) G2: 1.43 (0.94) Adj mean diff (95% CI): -0.42 (-0.67 to -0.17)	NR	NR
Vera, 2010[14] NA Puerto Rico Government	**SCL-20** Regression coefficient: treatment X time = -0.3; p <0.001	**N (%) achieving ≥50% decrease in SCL-20** *@ 6 mths* G1: 41 (46%) G2: 16 (19%) Ratio: 4.04 (2.01 to 8.31)	NR
Lin, 2006[15] Lin, 2003[16] IMPACT: arthritis (secondary analyses) US Multiple sources	NR	**% achieving 50% reduction on SCL** *@ 12 mths* G1: 41% G2: 18% OR (95% CI): 3.28 (2.4 to 4.5), p < 0.001	**% no longer meeting DSM criteria for MDD** *@ 6 mths* G1: 24 G2: 38

First author, year Trial name Country Funding source	MH symptom improvement	MH response rate	M H remission and/or recurrence
Fann, 2009[17] IMPACT: cancer (secondary analyses) US Multiple sources	**SCL-20, mean (SD):** *@ 6 mths* G1: 0.89 (0.07) G2: 1.16 (0.08) p = 0.008 *@ 12 mths* G1: 1.05 (0.07) G2: 1.39 (0.07) p = 0.004 *@ 18 mths* G1: 1.10 (0.08) G2: 1.39 (0.07) p = 0.012 *@ 24 mths* G1: 1.15 (0.08) G2: 1.34 (0.08) p = 0.087 **Depression-free days, mean (SD):** *@ 12 mths* G1: 185.8 (10.9) G2: 135.0 (10.2) Between group diff, p < 0.001 *During second year* G1: 356.5 (21.7) G2: 247.6 (19.6) Between group diff, p < 0.001	**N (%) with ≥50% reduction on SCL-20** *@ 6 mths* G1: 59 (55%) G2: 34 (34%) p = 0.003 *@ 12 mths* G1: 39 (39%) G2: 19 (20%) p = 0.029 *@ 18 mths* G1: 38 (39%) G2: 16 (18%) p = 0.012 *@ 24 mths* G1: 30 (31%) G2: 16 (19%) p = 0.088 **Overall depression treatment response, %** G1: 39 G2: 20 Between group diff, p = 0.029 OR (95% CI): 2.69 (1.54 to 4.71)	**N (%) with SCL-20 < 0.5** *@ 6 mths* G1: 34 (32%) G2: 15 (15%) p = 0.006 *@ 12 mths* G1: 22 (22%) G2: 9 (9%) p = 0.031 *@ 18 mths* G1: 18 (19%) G2: 7 (8%) p = 0.053 *@ 24 mths* G1: 17 (18%) G2: 6 (7%) p = 0.087 OR (95% CI): 2.44 (1.51 to 3.94)

First author, year Trial name Country Funding source	MH symptom improvement	MH response rate	M H remission and/or recurrence
Williams, 2004[18] Katon, 2006[19] IMPACT: diabetes (secondary analyses) US Multiple sources	**SCL-20, mean (SD):** *@ 6 mths* G1: 0.93 (0.67) G2: 1.28 (0.72) between-group diff (95% CI): -0.34 (-0.48 to -0.20) *@ 12 mths* G1: 1.00 (0.68) G2: 1.46 (0.68) between-group diff (95% CI): -0.43 (-0.57 to -0.29) **Depression-free days, mean (SD),** G1 vs G2 1st 12 mths, mean (95% CI) 59.4 (37.3 to 81.4) 2nd 12 mths, mean (95% CI) 56.1 (31.8 to 80.4) Over 24 mths, mean (95% CI) 115.4 (71.7 to 159.1)	NR	NR

a G1 = intervention arm; G2 = control arm

Abbreviations: Adj, adjusted; BL, baseline; CI, confidence interval; HRSD; Hamilton Rating Scale for Depression; MH, mental health; mths, months; NR, not reported; OR, odds ratio; PGI, Patient Global Improvement; PHQ, Patient Health Questionnaire; SCL, Symptom Checklist; SD, standard deviation; SE, standard error; US, United States

Evidence Table 6. Mental health outcomes: treatment adherence and treatment satisfaction[a]

First author, year Trial name Country Funding source	MH treatment adherence	MH treatment satisfaction
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	NR	NR
Ell, 2008[2] ADAPt-C US Government	NR	**% satisfied to extremely satisfied with PST** (among G1 patients choosing PST) *@ 6 mths* 84.4% *@ 12 mths* 92.3% **% satisfied to extremely satisfied with medication** (among G1 patients choosing medication) *@ 6 mths* 40.5% *@ 12 mths* 42.3%
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	NR	**% reporting "satisfied" to "very satisfied" with emotional care** *@ 18 mths* G1: 89.5 G2: 77.9 OR 2.43 (95% CI 1.23 to 4.77), p = 0.01

First author, year Trial name Country Funding source	MH treatment adherence	MH treatment satisfaction
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	**Adherence to antidepressant refills, N (%)** *@ 6 mths* G1: 99 (60.4) G2: 80 (48.5) Adj OR (95% CI): 2.29 (1.38 to 3.82) *@ 9 mths* G1: 98 (59.8) G2: 76 (46.1) Adj OR (95% CI): 2.78 (1.62 to 4.76) *@ 12 mths* G1: 94 (57.3) G2: 76 (46.1) Adj OR (95% CI): 2.18 (1.32 to 3.62)	**N (%) moderately to very satisfied with depression care:** *@ 6 mths* G1: 104 (72.7) G2: 89 (60.1) Adj OR (95% CI): 2.01 (1.18 to 3.43) *@ 12 mths* G1: 106 (72.6) G2: 76 (53.9) OR (95% CI): 2.88 (1.67 to 4.97)
Katon, 2010[10] TEAMcare US Multiple sources	NR	**N (%) satisfied with depression care; change from BL** *@ Baseline* G1: 47 (51%) G2: 43 (47%) *@ 6 mths* G1: 84 (87%); +37 (+36%) G2: 53 (62%); +10 (+15%) *@ 12 mths* G1: 81 (90%); +34 (+39%) G2: 46 (55%); +3 (+8%) Overall P < 0.001
Pyne, 2011[11] HITIDES US Government	**Antidepressant medication regimen adherence, N (%)** (defined as # pills taken over past 4 days / # pills prescribed over past 4 days ≥ 80%) *@ 6 mths* G1: 52 (78.8) G2: 50 (69.4) Unadj OR (95% CI)=1.60 (0.74 to 3.45) Adj OR (95% CI)=1.65 (0.75 to 3.62); p=0.22 *@ 12 mths* G1: 45 (76.3) G2: 51 (85.0) Unadj OR (95% CI): 0.55 (0.21 to 1.44) Adj OR (95% CI)= 0.56 (0.20-1.57); p=0.27	NR

First author, year Trial name Country Funding source	MH treatment adherence	MH treatment satisfaction
Rollman, 2009[12] Bypassing the Blues US Government	NR	NR
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	NR	**Care rated as very good or excellent N (%)** G1: 68 (79) G2: NR
Vera, 2010[14] NA Puerto Rico Government	NR	NR
Lin, 2006[15] Lin, 2003[16] IMPACT: arthritis (secondary analyses) US Multiple sources	NR	NR

First author, year Trial name Country Funding source	MH treatment adherence	MH treatment satisfaction
Fann, 2009[17] IMPACT: cancer (secondary analyses) US Multiple sources	NR	**% rating "good or excellent"** *@ BL* Overall: 44 G1:42 G2:47 Between-groups difference, p = 0.713 *@ 12 mths* Overall: 85 G1: 93 G2: 74 Between-groups difference, p = 0.015 *@ 18 mths* Overall: 55 G1: 61 G2: 49 Between-groups difference, p = 0.209 *@ 24 mths* Overall: 54 G1: 56 G2: 51 Between-groups difference, p = 0.684
Williams, 2004[18] Katon, 2006[19] IMPACT: diabetes (secondary analyses) US Multiple sources	NR	NR

a G1 = intervention arm; G2 = control arm

Abbreviations: Adj, adjusted; BL, baseline; CI, confidence interval; MH, mental health; mths, months; NR, not reported; OR, odds ratio; US, United States

Evidence Table 7. Mental health outcomes: morbidity, mortality, self-reported health status, and quality of life[a]

First author, year Trial name Country Funding source	MH-related morbidity and / or mortality	MH-related self-reported health status	MH-related quality of life
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	NR	NR	**FACT social/family well-being score** *mean change BL to 8 mths (SD)* G1: +0.39 (5.35) G2: -1.37 (5.07) Between-groups diff (95% CI): +1.76 (-1.12 to 4.63); p = 0.88 **FACT emotional well-being score** *mean change BL to 8 mths (SD)* G1: +2.15 (3.56) G2: -0.50 (5.26) Between-groups diff (95% CI): +2.65 (0.18 to 5.12); p = 0.03

First author, year Trial name Country Funding source	MH-related morbidity and / or mortality	MH-related self-reported health status	MH-related quality of life
Ell, 2008[2] ADAPt-C US Government	Investigators were unaware of any attempted or completed suicides in either the intervention or control group	**SF-12 mental, mean (SE)** *@ BL* G1: 32.15 (0.71) G2: 33.97 (0.71) Adj mean diff (95% CI): -1.82 (-3.64 to 0.01); p = 0.05 *@ 6 mths* G1: 44.49 (0.83) G2: 41.74 (0.84) Adj mean diff (95% CI): +2.75 (0.54 to 4.96); p = 0.01 *@ 12 mths* G1: 45.65 (0.88) G2: 43.46 (0.96) Adj mean diff (95% CI): +2.19 (-0.26 to 4.63); p = 0.08	**FACT social/family well-being, mean (SE)** *@ BL* G1: 13.73 (0.45) G2: 14.4 (0.45) Adj mean diff (95% CI): -0.68 (-1.82 to 0.47); p= 0.25 *@ 6 mths* G1: 14.97 (0.51) G2: 14.81 (0.52) Adj mean diff (95% CI): +0.15 (-1.19 to 1.5); p = 0.82 *@ 12 mths* G1: 17.38 (0.54) G2: 14.69 (0.58) Adj mean diff (95% CI): +2.7 (1.22 to 4.17); p < 0.001 **FACT emotional well-being, mean (SE)** *@ BL* G1: 12.47 (0.3) G2: 13.64 (0.3) Adj mean diff (95% CI): -1.16 (-1.93 to -0.4); p < 0.01 *@ 6 mths* G1: 15.96 (0.35) G2: 15.46 (0.35) Adj mean diff (95% CI): +0.5 (-0.42 to 1.43); p = 0.29 *@ 12 mths* G1: 17.59 (0.37) G2: 16.3 (0.4) Adj mean diff (95% CI): +1.29 (0.26 to 2.23) p = 0.01

First author, year Trial name Country Funding source	MH-related morbidity and / or mortality	MH-related self-reported health status	MH-related quality of life
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	NR	**SF-12 mental, mean (SD):** *@ BL* G1: 32.27 (8.48) G2: 34.06 (9.63) p = 0.40 *@ 6 mths* G1: 46.21 (10.33) G2: 42.15 (12.27) p < 0.001 *@ 12 mths* G1: 47.31 (11.48) G2: 43.60 (12.46) p < 0.001 *@ 18 mths* G1: 45.10 (12.19) G2: 43.49 (11.66) p = 0.03	**Number of social stressors, mean (SD)** *@ BL* G1: 4.31 (2.70) G2: 3.15 (2.38) p < 0.001 *@ 6 mths* G1: 2.53 (2.18) G2: 2.34 (2.07) p = 0.96 *@ 12 mths* G1: 2.29 (2.14) G2: 2.40 (2.13) p = 0.19 *@ 18 mths* G1: 2.58 (2.06) G2: 2.39 (2.02) p = 0.70
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	NR	NR	NR
Katon, 2010[10] TEAMcare US Multiple sources	NR	NR	NR

First author, year Trial name Country Funding source	MH-related morbidity and / or mortality	MH-related self-reported health status	MH-related quality of life
Pyne, 2011[11] HITIDES US Government	NR	**SF-12 mental** *@ BL* G1: 34.3 (10.5) G2: 35.1 (11.0) *Change from BL* *@ 6 mths* G1: +5.8 G2: +3.7 p=0.26 Adjusted group diff beta (95% CI): +2.0 (−1.0 to 5.0); p=0.19 *@ 12 mths* G1: +7.1 G2: +5.8 p=0.50 Adjusted group diff beta (95% CI): +1.7 (−1.7 to 5.2); p=0.32	NR

First author, year Trial name Country Funding source	MH-related morbidity and / or mortality	MH-related self-reported health status	MH-related quality of life
Rollman, 2009[12] Bypassing the Blues US Government	**Hospitalization for suicidal ideation (N):** G1: 1 G2: 0	**SF-36 mental, mean (SE)** *@ 8 mths* G1: 50.0 (1.0) G2: 46.2 (1.1) *Change from BL to 8 mths:* G1: + 6.8 (1.0) G2: + 3.6 (1.0) Between-group difference (95% CI): +3.2 (0.5 to 6.0), p = 0.02 Effect Size (95% CI): 0.30 (0.17 to 0.52), p = 0.01 *MEN ONLY* *@ 8 mths* G1: 52.1 (1.4) G2: 45.4 (1.3) *Change from BL to 8 mths:* G1: + 7.8 (1.3) G2: + 2.1 (1.2) Between-group difference (95% CI): 5.7 (2.2 to 9.2), p = 0.001 Effect Size (95% CI): 0.53 (0.23 to 0.84), p < 0.001 *WOMEN ONLY* *@ 8 mths* G1: 47.8 (1.6) G2: 46.9 (1.7) *Change from BL to 8 months:* G1: + 5.9 (1.5) G2: + 5.1 (1.6) Between-group difference (95% CI): 0.7 (-3.3 to 4.9), p = 0.74 Effect Size (95% CI): 0.08 (-0.28 to 0.43), p = 0.68	NR
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	**Suicide** G1: 0 G2: 1	NR	NR

First author, year Trial name Country Funding source	MH-related morbidity and / or mortality	MH-related self-reported health status	MH-related quality of life
Vera, 2010[14] NA Puerto Rico Government	NR	NR	NR
Lin, 2006[15] Lin, 2003[16] IMPACT: arthritis (secondary analyses) US Multiple sources	NR	NR	NR
Fann, 2009[17] IMPACT: cancer (secondary analyses) US Multiple sources	**Suicidality** remained significantly lower in G1 than G2, values and p = NR	NR	NR
Williams, 2004[18] Katon, 2006[19] IMPACT: diabetes (secondary analyses) US Multiple sources	NR	**SF-12 mental** Between-groups diff (95% CI): +2.44 (0.79 to 4.09), favoring G1	NR

a G1 = intervention arm; G2 = control arm

Abbreviations: Adj, adjusted; BL, baseline; CI, confidence interval; diff, difference; FACT, Functional Assessment of Cancer Therapy; MH, mental health; mths, months; NR, not reported; SD, standard deviation; SE, standard error; US, United States

Evidence Table 8. Mental health outcomes: health care utilization and intervention costs

First author, year Trial name Country Funding source	MH-related health care utilization	Intervention costs
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	Among intervention patients: 5 (18%) received no intervention services 12 (43%) received ≥4 PST sessions 3 (11%) chose medication as first-line treatment Study psychiatrist recommended medication for 4 patients after non-response to PST Of 7 patients on medication, only 3 received antidepressants for ≥5 mths	NR
Ell, 2008[2] ADAPt-C US Government	N (%) with any depression treatment @ 12 mths G1: NR (72.3) G2: 24 (10.4) OR: 30.88; p<0.0001	$524 per intervention patient over 12 mths

First author, year Trial name Country Funding source	MH-related health care utilization	Intervention costs
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	**Antidepressant receipt, N (%)** *@ BL:* G1:36(18.9) G2: 24(12.7) p = 0.08 *Over 12 mths:* G1:113(58.5) G2:52(26.8) p < 0.001 *@ 18 mths*: G1:52(36.1) G2:27(19.7) p = 0.002 **PST or counseling receipt, N (%)** *@ BL:* G1:29 (15.0) G2: 20 (10.3) p = 0.11 *Over 12 mths:* G1:153(79.3) G2: 26 (13.4) p < 0.001 *@ 18 mths:* G1: 35 (24.3) G2: 17 (12.4) p = 0.01 **Receipt of any depression treatment , N (%)** *@ BL:* G1: 43 (22.3) G2: 30 (15.5) p = 0.07 *Over 12 mths:* G1: 162 (83.9) G2: 63 (32.5) p < 0.001 *@ 18 mths:* G1: 66 (45.8) G2: 33 (24.1) p < 0.001	$820 per patient

First author, year Trial name Country Funding source	MH-related health care utilization	Intervention costs
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	**4 or more specialty mental health visits at 12 mo, N(%)** G1: 111 (67.7) G2: 11 (6.7) Adj OR (95% CI) =29.31 (14.65 to 58.66) **N (%) receiving adequate dosage of antidepressant** *BL to 6-mth* G1: 94 (57.3) G2: 66 (40.0) Adj OR (95% CI): 4.15 (2.28 to 7.55) *6 mth to 12 mth* G1: 87 (53.0) G2: 63 (38.2) Adj OR (95%): 2.90 (1.69-4.98)	**Total intervention service costs, mean (SD):** *BL through 12 mths* $545 ($222) **Intervention visit costs, mean (SD) / median (IQR)** *@ 5 yrs* $543 ($228) / $546 ($331) **Screening costs** $27
Katon, 2010[10] TEAMcare US Multiple sources	NR	$79 per in-person nurse visit $31 per telephone nurse contact $100 fixed per-patient for costs of supervision and information systems support
Pyne, 2011[11] HITIDES US Government	**Receipt of antidepressant, N (%)** *@ 6 mths* G1: 72 (66.7) G2: 78 (67.8) Unadj OR (95% CI): 0.89 (0.49 to 1.78) Adj OR (95% CI): 0.89 (0.46 to 1.74); p=0.93 *@ 12 mths* G1: 65 (61.9) G2: 69 (62.7) Unadj OR (95% CI): 0.93 (0.49 to 1.78) Adj OR (95% CI): 0.93 (0.49 to 1.78); p=0.98	NR

First author, year Trial name Country Funding source	MH-related health care utilization	Intervention costs
Rollman, 2009[12] Bypassing the Blues US Government	**Self-reported antidepressant use, N (%)** *@ BL* G1: 22 (15) G2:13 (9) *@ 8 mths* G1: 55 (44) G2:40 (31) Difference (95% CI): 13 (1 to 24) p = 0.008 **Mental health specialist care use N (%):** G1: 5 (4) G2: 7 (6) p = 0.56	NR
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	**Receipt of therapuetic dose of antidepressant, N (%)** *@ BL* G1: 17 (17) G2: 20 (20) *@ 6 mths* G1: 62 (65) G2: 32 (34) p<0.0001	**Cost of nurse time + psychiatrist time:** $523 per patient **Total average extra cost (95% CI) of the intervention per patient over 6 months** (British pounds) £334.86 (£276 to £393) per patient
Vera, 2010[14] NA Puerto Rico Government	**% receiving depression treatment (unspecified):** G1: 97% (47 CBT, 36 medication, 3 combination, 3 none) G2: 57% (25 medication, 19 psychotherapy, 39 none)	NR

First author, year Trial name Country Funding source	MH-related health care utilization	Intervention costs
Lin, 2006[15] Lin, 2003[16] IMPACT: arthritis (secondary analyses) US Multiple sources	**Antidepressant use** *@ BL* G1: 43% G2: 47% *@ 12 mths* G1: 66% G2: 52% p <0.001 **MH service use / psychotherapy** *@ BL* G1: 8% G2: 7% *@ 12 mths* G1: 47% G2: 16% p<0.001	NR

First author, year Trial name Country Funding source	MH-related health care utilization	Intervention costs
Fann, 2009[17] IMPACT: cancer (secondary analyses) US Multiple sources	**Antidepressant use over 12 months** OR (95% CI): 2.07 (1.45 to 2.94), p = NR **Antidepressant use over past 3 months, %** *@ BL* Overall: 43 G1: 49 G2:36 *@ 6 mths* Overall:56 G1:64 G2:48 Between group diff, p = 0.036 *@ 12 mths* Overall:57 G1:67 G2:45 Between group diff, p = 0.010 *@ 18 mths* Overall:48 G1:56 G2:40 Between group diff, p = 0.041 *@ 24 mths* Overall:46 G1:52 G2:39 Between group diff, p = 0.121	NR

First author, year Trial name Country Funding source	MH-related health care utilization	Intervention costs
Fann, 2009[17] IMPACT: cancer (secondary analyses) (cont'd)	**MH Utilization** OR (95% CI): 4.48 (2.80 to 7.10), p = NR **Any MH visit past 3 months: %** *@ BL* Overall: 8 G1:14 G2:2 *@ 6 mths* Overall:28 G1:40 G2:15 Between group diff, p < 0.001 *@ 12 mths* Overall:29 G1:42 G2:16 Between group diff, p < 0.001 *@ 18 mths* Overall:14 G1:15 G2:12 Between group diff, p = 0.561 *@ 24 mths* Overall:15 G1:17 G2:12 Between group diff, p = 0.386	
Williams, 2004[18] Katon, 2006[19] IMPACT: diabetes (secondary analyses) US Multiple sources	**Antidepressant Use @ 12 months, %** G1: 76 G2: 51 Between group diff, p < 0.001	$597 (95% CI: 560 to 635) per patient over 24 mths

Abbreviations: BL, baseline; CI, confidence interval; IQR, interquartile range; mths, months; NR, not reported; SD, standard deviation; US, United States

Evidence Table 9. Chronic medical condition outcomes: symptom improvement and response[a]

First author, year Trial name Country Funding source	CM condition-related symptom improvement	CM condition-related functional impairment/disability
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	NR	NR
Ell, 2008[2] ADAPt-C US Government	**Brief Pain Inventory score, mean (SE)** *@ BL* G1: 11.66 (0.81) G2: 11.35 (0.81) Adj mean diff (95% CI): + 0.32 (-1.75 to 2.38); p = 0.76 *@ 6 mths* G1: 9.79 (0.94) G2: 11.65 (0.95) Adj mean diff (95% CI): -1.86 (-4.33 to 0.61); p = 0.14 *@ 12 mths* G1: 8.83 (0.99) G2: 11.55 (1.07) Adj mean diff (95% CI): -2.72 (-5.44 to 0.01); p =0.05	NR

First author, year Trial name Country Funding source	CM condition-related symptom improvement	CM condition-related functional impairment/disability
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	**HbA1c, mean (SD)** Baseline G1: 9.01 (2.15) G2: 9.05 (2.22) p = 0.98 6 months: G1: 8.45 (2.06) G2: 8.42 (2.00) p = 0.85 12 months: G1: 8.52 (2.01) G2: 8.59 (2.26) p = 0.98 18 months: G1: 8.34 (2.04) G2: 8.50 (2.17) p = 0.57 **Whitty-9 Diabetes Symptoms, mean (SD)** Baseline G1: 2.33 (0.76) G2: 2.15 (0.75) p = 0.07 6 months: G1: 1.65 (0.59) G2: 1.79 (0.65) p = 0.003 12 months: G1: 1.66 (0.57) G2: 1.69 (0.56) p = 0.18 18 months: G1: 1.79 (0.71) G2: 1.74 (0.64) p = 0.85	**Sheehan Disability Scale of Functional Impairment, mean (SD):** *@ BL* G1: 6.30 (2.67) G2: 5.74 (2.84) p = 0.47 *@ 6 mths* G1: 3.07 (2.93) G2: 3.55 (2.90) p = 0.01 *@ 12 mths* G1: 2.93 (3.12) G2: 3.17 (3.04) p = 0.06 *@ 18 mths* G1: 3.28 (3.13) G2: 3.18 (2.89) p = 0.40

First author, year Trial name Country Funding source	CM condition-related symptom improvement	CM condition-related functional impairment/disability
Ell, 2010[3] Multifaceted Diabetes and Depression Program (cont'd)	**Pain Impact score, mean (SD):** *@ BL* G1: 2.91 (1.24) G2: 2.66 (1.34) p = 0.22 *@ 6 mths* G1: 2.23 (1.23) G2: 2.59 (1.33) p = 0.001 *@ 12 mths* G1: 2.44 (1.32) G2: 2.55 (1.39) p = 0.12 *@ 18 mths* G1: 2.54 (1.32) G2: 2.36 (1.41) p = 0.50	
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	**HbA1c, mean (SD)** NSD between groups at any timepoint; group values presented only in graph. Overall (both groups) mean (SD): Baseline 7.99 (1.55) @ 6 mths 7.58 (1.47) @ 12 mths 7.64 (1.57) @ 24 mths G1: 7.87 G2: 7.82 p = 0.68	NR

First author, year Trial name Country Funding source	CM condition-related symptom improvement	CM condition-related functional impairment/disability
Katon, 2010[10] TEAMcare US Multiple sources	**HbA1c** Baseline: G1: 8.14 (2.03) G2: 8.04 (1.87) 6 months: G1: 7.42 (1.32) G2: 7.87 (1.93) G1 change from BL to 6 months: -0.72 G2 change from BL to 6 months: -0.17 12 months: G1: 7.33 (1.21) G2: 7.81 (1.90) G1 change from BL to 12 months: -0.81, p =NR G2 change from BL to 12 months: -0.23, p = NR 12-month between-group difference (95% CI): -0.56 (-0.85 to -0.27); p < 0.001 **LDL Cholesterol (mg/dL) mean (SD)** Baseline: G1: 106.8 (35.4) G2: 109.4 (36.7) 12 months: G1: 91.9 (36.7) G2: 101.4 (36.6) G1 change: -14.9, p =NR G2 change: -8.0, p = NR 12-month between-group difference (95% CI): -9.1 (-17.5 to -0.8); p = NR **SBP (mmHG), mean (SD)** Baseline: G1: 135.7 (18.4) G2: 131.9 (17.0) 6 months: G1: 131.9 (15.2) G2: 133.5 (20.4) G1 change from BL to 6 months: -3.8 G2 change from BL to 6 months: +1.6 12 months: G1: 131.0 (18.2) G2: 132.3 (17.4) G1 change from baseline to 12 months: -4.7, p =NR G2 change from baseline to 12 months: -0.4, p = NR 12-month between-group difference (95% CI): -3.4 (-6.9 to -0.1); p = NR	NR

First author, year Trial name Country Funding source	CM condition-related symptom improvement	CM condition-related functional impairment/disability
Katon, 2010[10] TEAMcare (cont'd)	**≥1.0% decrease from baseline in HbA1c at 12 months, N (%)** G1: 37 (36) G2: 18 (19) p = 0.006 **≥10 mm Hg decrease from baseline in SBP at 12 months, N (%)** G1: 41 (41) G2: 25 (25) p = 0.016 **N (%) achieving clinically significant change / falling below guidelines for all conditions @ 12 months:** G1: 36 (37) G2: 19 (22) P = 0.024 **% below ADA guidelines for hemoglobin, SBP, and LDL at 12 months** G1: 16.3 G2: 12.5 P = NS	
Pyne, 2011[11] HITIDES US Government	**HIV symptom severity: 20-items Symptoms Distress Module, intervention effect** *@ 6 months* G1: −7.6 G2: −4.5 Effect size = -0.2; p=0.06 Adj group diff, beta (95% CI): −2.6 (−3.5 to −1.8); p .001 *@ 12 months* G1: −7.9 G2: −7.3 Effect size = -0.04; p=0.75 Adj grp diff, beta (95% CI): −0.82 (−1.6 to −0.07); p=.03	NR

First author, year Trial name Country Funding source	CM condition-related symptom improvement	CM condition-related functional impairment/disability
Rollman, 2009[12] Bypassing the Blues US Government	NR	**DASI mean (SE)** @ Baseline G1: 7.1 (0.9) G2: 7.9 (0.9) @ 8 months G1: 25.2 (1.0) G2: 21.4 (1.0) Change @ 8 months: G1: +18.1 (1.0) G2: +13.5 (1.0) Between-group difference (95% CI): 4.6 (1.9 to 7.3), p = 0.001 Effect Size (95% CI): 0.32 (0.09 to 0.54), p = 0.006 MEN ONLY @ Baseline G1: 7.5 (1.2) G2: 7.3 (1.1) @ 8 months G1: 29.3 (1.3) G2: 22.9 (1.2) Change @ 8 months: G1: +21.8 (1.3) G2: +15.6 (1.2) Between-group difference (95% CI): 6.1 (2.7 to 9.6), p = 0.001 Effect Size (95% CI): 0.55 (0.24 to 0.85), p < 0.001 WOMEN ONLY @ Baseline G1: 6.6 (1.3) G2: 8.5 (1.5) @ 8 months G1: 21.1 (1.4) G2: 19.9 (1.6) Change @ 8 months: G1: +14.5 (1.4) G2: +11.4 (1.6) Between-group difference (95% CI): 3.1 (-1.1 to 7.3), p = 0.14 Effect Size (95% CI): 0.10 (-0.25 to 0.46), p = 0.58

First author, year Trial name Country Funding source	CM condition-related symptom improvement	CM condition-related functional impairment/disability
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	NR	NR
Vera, 2010[14] NA Puerto Rico Government	NR	NR

First author, year Trial name Country Funding source	CM condition-related symptom improvement	CM condition-related functional impairment/disability
Lin, 2006[15] Lin, 2003[16] IMPACT: arthritis (secondary analyses) US Multiple sources	**Pain intensity, mean (SE)** *@ baseline* G1: 6.04 (0.29) G2: 6.32 (0.29) Betw-grp diff: -0.28 (-0.6 to +0.04); p = 0.08 *@ 6 mo* G1: 5.48 (0.16) G2: 5.69 (0.15) Betw-grp diff: -0.21 (-0.55 to + 0.13); p = 0.22 *@ 12 mo* G1: 5.62 (0.16) G2: 6.15 (0.16) Betw-grp diff: -0.53 (-0.92 to -0.14); p = 0.009	**GCPS: Arthritis interferes w/daily activities (range 0-10), mean (SE)** *@ BL* G1: 5.17 (0.36) G2: 5.38 (0.37) Betw-grp diff: -0.21 (-0.6 to +0.19); p = 0.30 *@ 6 mths* G1: 4.08 (0.20) G2: 4.65 (0.17) Betw-grp diff: -0.56 (-0.96 to -0.16); p = 0.006 *@ 12 mths* G1: 4.40 (0.18) G2: 4.99 (0.17) Betw-grp diff: -0.59 (-1.00 to -0.19); p = 0.004 **GCPS: Arthritis pain interferes w/daily activities (1-5), mean (SE)** *@ BL* G1: 3.17 (0.12) G2: 3.24 (0.12) Betw-grp diff: -0.07 (-0.21 to +0.06); p = 0.29 *@ 6 mths* G1: 2.88 (0.07) G2: 3.11 (0.07) Betw-grp diff: -0.22 (-0.36 to -0.09); p = 0.005 *@ 12 mths* G1: 2.92 (0.07) G2: 3.17 (0.07) Betw-grp diff: -0.26 (-0.41 to -0.10); p = 0.002 **Sheehan Disability Scale, mean (SE)** *@ 12 mths* G1: 3.9 (0.15) G2: 4.7 (0.15) Betw-grp diff: -0.82 (-1.17 to -0.47); p < 0.001

First author, year Trial name Country Funding source	CM condition-related symptom improvement	CM condition-related functional impairment/disability
Fann, 2009[17] IMPACT: cancer (secondary analyses) US Multiple sources	NR	**Sheehan Disability Scale, mean (SD/SE?):** *@ 6 mths* Overall: 4.13 (0.22) G1: 3.92 (0.29) G2: 4.36 (0.30); p = 0.266 *@12 mths* Overall: 4.34 (0.21) G1: 3.81 (0.28) G2: 4.91 (0.31); p = 0.011 *@ 18 mths* Overall: 3.97 (0.20) G1: 3.69 (0.30) G2: 4.28 (0.29); p = 0.185 *@ 24 mths* Overall: 4.10 (0.25) G1: 4.16 (0.37) G2: 4.03 (0.28); p = 0.774
Williams, 2004[18] Katon, 2006[19] IMPACT: diabetes (secondary analyses) US Multiple sources	**HbA1c %, mean (SD):** *@ Baseline:* Overall: 7.28 (1.43) G1: 7.26 (1.32) G2: 7.30 (1.54) *@ 6 months:* Overall: 7.07 (1.27) G1: 7.07 (1.23) G2: 7.08 (1.32) *@ 12 months:* Overall: 7.11 (1.37) G1: 7.11 (1.13) G2: 7.11 (1.42) p > 0.20 at all timepoints	**Functional Impairment (range 0-10), mean (SD):** *@ BL* G1: 5.20 (2.46) G2: 5.14 (2.42) Between-group difference (95% CI): +0.12 (-0.35 to 0.59) *@ 6 mths* G1: 4.37 (2.67) G2: 4.63 (2.70) Between-group difference (95% CI): -0.20 (-0.78 to 0.39) *@ 12 mths* G1: 3.91 (2.76) G2: 4.90 (2.63) Between-group difference (95% CI): -0.89 (-1.46 to -0.32)

Evidence Table 10. Chronic medical condition outcomes: treatment adherence and treatment satisfaction[a]

First author, year Trial name Country Funding source	CM condition-related treatment adherence	CM condition-related treatment satisfaction
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	treatment adherent if they had completed or were in the process of completing all doctor-recommended treatment or follow-up visits; nonadherent if treatment was recommended but not received **Adherence to cancer treatment at 8 months N (%)** G1: 25 (89) G2: 19 (70) OR (95% CI) = 3.51 (0.82 to 15.03); p=0.08	NR
Ell, 2008[2] ADAPt-C US Government	NR	NR
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	NR	NR

First author, year Trial name Country Funding source	CM condition-related treatment adherence	CM condition-related treatment satisfaction
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	**Generally healthy diet (# days in past 7), mean (SD)** @ baseline: G1:3.7 (2.1) G2: 3.7 (2.1) @ 6 months: G1: 4.2 (2.0) G2: 4.4 (1.9) Adj mean diff (95% CI): +0.07 (-0.21 to 0.35) @ 12 months: G1: 4.5 (1.9) G2: 4.5 (2.1) Adj mean diff (95% CI): -0.01 (-0.56 to 0.54) **Recommended Diet, # days (in past 7), mean (SD)** @ baseline: G1:3.5 (1.7) G2: 3.2 (1.6) @ 6 months: G1: 3.9 (1.8) G2: 3.8 (1.7) Adj mean diff (95% CI): -0.01 (-0.22 to 0.20) @ 12 months: G1: 4.1 (1.9) G2: 3.8 (1.8) Adj mean diff (95% CI): -0.05 (-0.42 to 0.32) **# days (in past 7) ≥30 mins physical activity, mean (SD)** @ baseline: G1: 2.6 (2.4) G2: 2.3 (2.2) @ 6 months: G1: 2.3 (2.3) G2: 2.4 (2.3) Adj mean diff (95% CI): +0.19 (-0.21 to 0.60) @ 12 months: G1: 2.7 (2.4) G2: 2.6 (2.5) Adj mean diff (95% CI): -0.12 (-0.50 to 0.26)	NR

First author, year Trial name Country Funding source	CM condition-related treatment adherence	CM condition-related treatment satisfaction
Pathways (cont'd)	**Exercise session (# days in past 7), mean (SD)** @ baseline: G1: 1.9 (2.2) G2: 1.2 (1.8) @ 6 months: G1: 1.6 (2.2) G2: 1.7 (2.2) Mean adj diff (95% CI): +0.19 (-0.37 to 0.76) @ 12 months: G1:1.9 (2.3) G2: 1.6 (2.1) Mean adj diff (95% CI): -0.19 (-0.57 to 0.19) **% (SD) smoking** Baseline G1: 18 (11.1) G2: 28 (17.3) @12 mo G1: 18 (12.3) G2: 24 (16.9) OR (95% CI): NR (0.4 to 4.9) **NONadherence, % days, mean (SD):** **Oral hypoglycemics:** Baseline: G1: 19.8 (21.3) G2: 22.9 (24.0) @ 12 months G1: 28.2 (28.9) G2: 24.0 (24.7) Adj mean diff (95% CI): -6.3 (-11.91 to -0.71), p < 0.03 **ACE Inhibitors:** Baseline G1: 27.4 (27.1) G2: 29.7 (29.3) @ 12 months G1: 24.2 (22.7) G2: 18.9 (17.47) Adj mean diff (95% CI): -2.5 (-8.69 to 3.70)	NR

First author, year Trial name Country Funding source	CM condition-related treatment adherence	CM condition-related treatment satisfaction
Pathways (cont'd)	**NONadherence, % days, mean (SD):** **Lipid-lowering Agents:** Baseline G1: 29.3 (26.7) G2: 24.5 (23.0) @ 12 months G1: 28.8 (27.1) G2: 27.7 (24.0) Adj mean diff (95% CI): -0.2 (-7.23 to 6.76)	NR
Katon, 2010[10] TEAMcare US Multiple sources	**N (%) adhering to general diet plan for ≥ 2 days/week** @ 12 months: G1: 68 (86) G2: 63 (81) P = 0.37 **N (%) adhering to specific diet plan for ≥ 2 days/week** @ 12 months: G1: 66 (84) G2: 60 (77) P = 0.30 **N (%) adhering to general exercise plan for ≥ 2 days/week** @ 12 months: G1: 43 (54) G2: 34 (44) P = 0.17 **N (%) adhering to specific exercise plan for ≥ 2 days/week** @ 12 months: G1: 23 (29) G2: 16 (21) P = 0.21	**Satisfaction with care of diabetes, HD, or both, N(%):** Baseline: G1: 73 (70) G2: 65 (68) 6 months: G1: 87 (90) G2: 65 (68) G1 change from baseline to 6 mths: +14 (+20%) G2 change from baseline to 6 mths: 0 (0%) 12 months: G1: 79 (86) G2: 62 (70) G1 change from baseline to 12 months: +6 (+16%) G2 change from baseline to 12 months: -3 (+2%) Between-group change over time, p < 0.001

First author, year Trial name Country Funding source	CM condition-related treatment adherence	CM condition-related treatment satisfaction
Pyne, 2011[11] HITIDES US Government	**HIV medication regimen adherence, N (%) (defined as # pills taken over past 4 days / # pills prescribed over past 4 days ≥ 95%)** @ 6 mo G1: 74 (77.1) G2: 72 (73.5) Unadj OR (95% CI): 1.23 (0.63 to 2.40) Adj OR (95% CI):1.20 (0.60 to 2.31); p=0 .65 @ 12 mo G1: 68 (73.9) G2: 64 (74.4) Unadj OR (95% CI): 0.93 (0.46 to 1.90) Adj OR (95% CI):1.60 (0.50 to 2.33); p=0 .89	NR
Rollman, 2009[12] Bypassing the Blues US Government	NR	NR
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	NR	NR
Vera, 2010[14] NA Puerto Rico Government	NR	NR
Lin, 2006[15] Lin, 2003[16] IMPACT: arthritis (secondary analyses) US Multiple sources	NR	NR
Fann, 2009[17] IMPACT: cancer (secondary analyses) US Multiple sources	NR	NR

First author, year Trial name Country Funding source	CM condition-related treatment adherence	CM condition-related treatment satisfaction
Williams, 2004[18] Katon, 2006[19] IMPACT: diabetes (secondary analyses) US Multiple sources	**Followed Recommended Diet (1=always, 5=never), mean (SD)** @ baseline: G1: 2.93 (1.40) G2: 2.63 (1.23) Mean adj diff (95% CI): 0.26 (-0.05 to 0.57), p = 0.10 @ 6 months: G1: 2.69 (1.26) G2: 2.61 (1.14) Mean adj diff (95% CI): -0.19 (-0.51 to 0.12), p > 0.20 @ 12 months: G1: 2.57 (1.08) G2: 2.54 (1.04) Mean adj diff (95% CI): -0.26 (-0.65 to 0.12), p = 0.18 **Took Prescribed Meds (1=always, 5=never), mean (SD)** @ baseline: G1: 1.16 (0.55) G2: 1.07 (0.34) Mean adj diff (95% CI): 0.05 (-0.05 to 0.15), p > 0.20 @ 6 months: G1: 1.15 (0.48) G2:1.23 (0.61) Mean adj diff (95% CI): -0.11 (-0.28 to 0.06), p = 0.20 @ 12 months: G1: 1.16 (0.53) G2: 1.19 (0.50) Mean adj diff (95% CI): -0.01 (-0.18 to 0.15), p > 0.20 **Weekly Exercise Days, mean (SD)** @ baseline: G1: 1.13 (1.20) G2: 1.33 (1.30) Mean adj diff (95% CI):-0.12 (-0.41 to 0.16), p > 0.20 @ 6 months: G1: 1.23 (1.15) G2: 1.19 (1.14) Mean adj diff (95% CI): +0.08 (-0.27 to 0.43), p > 0.20 @ 12 months: G1: 1.41 (1.23) G2: 1.10 (1.09) Mean adj diff (95% CI): +0.50 (0.12 to 0.89), p = 0.01	NR

First author, year Trial name Country Funding source	CM condition-related treatment adherence	CM condition-related treatment satisfaction
IMPACT: diabetes (cont'd)	**Weekly glucose testing days, mean (SD)** @ baseline: G1: 3.78 (3.18) G2: 4.43 (2.95) Mean adj diff (95% CI): - 0.54 (-1.17 to 0.09), p = 0.10 @ 6 months: G1: 4.27 (2.81) G2: 4.78 (2.78) Mean adj diff (95% CI): +0.25 (-0.39 to 0.89), p > 0.20 @ 12 months: G1: 4.16 (2.88) G2: 4.82 (2.71) Mean adj diff (95% CI): -0.21 (-1.08 to 0.66), p > 0.20 **Weekly foot inspection days, mean (SD)** @ baseline: G1: 5.13 (2.70) G2: 5.04 (2.73) Mean adj diff (95% CI): -0.04 (-0.66 to 0.58), p > 0.20 @6 months: G1: 5.53 (2.29) G2: 5.33 (2.36) Mean adj diff (95% CI): +0.14 (-0.51 to 0.80), p > 0.20 @ 12 months: G1: 5.84 (2.12) G2: 5.46 (2.26) Mean adj diff (95% CI): +0.28 (-0.48 to 1.05), p > 0.20	NR

Evidence Table 11. Chronic medical condition outcomes: self-reported health status, quality of life, and mortality, [a]

First author, year Trial name Country Funding source	Self-reported physical health status	Physical health-related quality of life	Mortality, N (%) deaths (all-cause unless otherwise specified)
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	NR	**Mean Change (SD) in Total FACT Score** G1: +4.83 (14.94) G2: -1.70 (16.52) Between-group difference (95% CI): +6.53 (-2.23 to 15.29); p= 0.13 **Mean Change (SD) in FACT Physical Well-being** G1: +0.48 (4.94) G2: +0.49 (6.03) Between-group difference (95% CI): -0.01 (-3.07 to 3.06); p=0.43 **Mean Change (SD) in FACT Functional Well-being** G1: +1.81 (4.85) G2: -0.23 (5.34) Between-group difference (95% CI): +2.05 (-0.77 to 4.86); p=0.14	*@ 8 mths* G1: 0 (0) G2: 8 (30) OR (95% CI) = 0.04 (0.002 to 0.74); p=0.002

First author, year Trial name Country Funding source	Self-reported physical health status	Physical health-related quality of life	Mortality, N (%) deaths (all-cause unless otherwise specified)
Ell, 2008[2] ADAPt-C US Government	**Adj SF-12 Physical, mean (SE)** *@ BL* G1: 37.59 (0.69) G2: 36.28 (0.69) Adj mean diff (95% CI): +1.3 (-0.46 to 3.07); p = 0.15 *@ 6 mths* G1: 40.18 (0.8) G2: 38.87 (0.81) Adj mean diff (95% CI): +1.31 (-0.79 to 3.41); p = 0.22 *@ 12 mths* G1: 41.48 (0.84) G2: 38.68 (0.91) Adj mean diff (95% CI): +2.79 (0.49 to 5.1); p = 0.02	**FACT-G Physical Well-being, mean (SE)** *@ BL* G1: 17.13 (0.39) G2: 16.8 (0.39) Adj mean diff (95% CI): +0.33 (-0.67 to 1.32); p = 0.52 *@ 6 mths* G1: 20.82 (0.45) G2: 19.29 (0.46) Adj mean diff (95% CI): +1.54 (0.35 to 2.72); p = 0.01 *@ 12 mths:* G1: 21.35 (0.48) G2: 20.13 (0.51) Adj mean diff (95% CI): +1.22 (-0.08 to 2.53); p = 0.07 **FACT-G Functional Well-being, mean (SE)** *@ BL* G1: 11.27 (0.37) G2: 11.37 (0.37) Adj mean diff (95% CI): -0.11 (-1.06 to 0.84); p = 0.83 *@ 6 mths* G1: 13.65 (0.43) G2: 12.45 (0.44) Adj mean diff (95% CI): +1.2 (0.06 to 2.34); p = 0.04 *@ 12 mths* G1: 14.31 (0.46) G2: 12.97 (0.49) Adj mean diff (95 CI): +1.34 (0.08 to 2.59); p = 0.04	*@ 6 mths* G1: 20 (8.26) G2: 24 (10.43) *@ 12 mths* G1: 31 (12.81) G2: 37 (16.09)

First author, year Trial name Country Funding source	Self-reported physical health status	Physical health-related quality of life	Mortality, N (%) deaths (all-cause unless otherwise specified)
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	**SF-12 physical, mean (SD):** *@ BL* G1: 34.77 (8.88) G2: 36.57 (9.31) p = 0.26 *@ 6 mths* G1: 40.76 (11.28) G2: 39.32 (10.81) p = 0.04 *@ 12 mths* G1: 38.81 (11.14) G2: 40.78 (11.68) p = 0.54 *@ 18 mths* G1: 39.87 (11.70) G2: 41.15 (10.89) p = 0.76	NR	NR
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	NR	NR	*@ 5 yrs* G1: 17 (10.3%) G2: 21 (12.8%)
Katon, 2010[10] TEAMcare US Multiple sources	NR	NR	*@ 12 months* G1: 1 (0.9) G2: 2 (1.8)

First author, year Trial name Country Funding source	Self-reported physical health status	Physical health-related quality of life	Mortality, N (%) deaths (all-cause unless otherwise specified)
Pyne, 2011[11] HITIDES US Government	**SF-12 physical, mean (SD)** *@ BL* G1: 41.5 (12.5) G2: 39.5 (11.6) *@ 6 mths* G1: +0.3 G2: −0.1 p=0.79 Adj group diff, beta (95% CI): +1.9 (−1.0 to 4.9); p=0.20 *@ 12 mths* G1: +1.7 G2: +0.9 p=0.62 Adj group diff, beta (95% CI): +0.5 (−2.3 to 3.4); p=0.71 **QWB-SA, mean (SD)** *@ BL* G1: 0.49 (0.12) G2: 0.44 (0.13) *@ 6 mths* G1: +0.02 G2: +0.005 p=0.51 Adj group diff, beta (95% CI): +0.03 (−0.01 to 0.06); p=0.16 *@ 12 mths* G1: +0.01 G2: +0.04 p=0.12 Adj group diff, beta (95% CI): −0.01 (−0.05 to 0.03); p=0.49	NR	*@ 6 mths:* G1: 2 (1.4) G2: 0 (0) *@ 12 mths (cumulative)* G1: 4 (2.9) G2: 5 (3.6)

First author, year Trial name Country Funding source	Self-reported physical health status	Physical health-related quality of life	Mortality, N (%) deaths (all-cause unless otherwise specified)
Rollman, 2009[12] Bypassing the Blues US Government	**SF-36 PCS mean (SE)** *@ BL* G1: 31.2 (0.8) G2: 30.3 (0.8) *@ 8 mths* G1: 44.0 (0.8) G2: 41.4 (0.8) *Change @ 8 mths:* G1: +12.8 (0.8) G2: +11.1 (0.8) Between-group difference (95% CI): 1.6 (-0.5 to 3.8), p = 0.14 Effect Size (95% CI): 0.26 (0.03 to 0.48), p = 0.03 MEN ONLY: *@ BL* G1: 31.9 (1.0) G2: 30.0 (1.0) *@ 8 mths* G1: 46.6 (1.1) G2: 41.0 (1.0) *Change @ 8 mths:* G1: +14.6 (1.0) G2: +11.1 (1.0) Between-group difference (95% CI): 3.6 (0.8 to 6.3), p = 0.01 Effect Size (95% CI): 0.57 (0.26 to 0.87), p < 0.001 WOMEN ONLY *@ baseline* G1: 30.5 (1.1) G2: 30.6 (1.2) *@ 8 mths* G1: 41.4 (1.2) G2: 41.8 (1.3) *Change @ 8 mths:* G1: +10.9 (1.2) G2: +11.2 (1.3) Between-group difference (95% CI): -0.3 (-3.6 to 3.0), p = 0.86 Effect Size (95% CI): -0.04 (-0.40 to 0.31), p = 0.82	NR	*@ 8 mths* G1: 1 (0.67) G2: 0 (0)

First author, year Trial name Country Funding source	Self-reported physical health status	Physical health-related quality of life	Mortality, N (%) deaths (all-cause unless otherwise specified)
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	NR	NR	**All-cause** *@ 12 mths* G1: 9 (8.9) G2:12 (12.1) **Cancer-related** *@12 mths* G1: 9 (8.9) G2: 11 (11.1)
Vera, 2010[14] NA Puerto Rico Government	**SF-36 social functioning score** *(estimated from graph)* G1: 55 G2: 35 p < 0.001 **SF-36 social functioning** @ 6 mo; treatment X time regression β = 0.70; p <0.001	NR	NR
Lin, 2006[15] Lin, 2003[16] IMPACT: arthritis (secondary analyses) US Multiple sources	**General health status, mean (SE)** *@ 12 mths* G1: 3.3 (0.05) G2: 3.6 (0.05) Betw-grp diff: -0.3 (-0.42 to -0.17); p <0.001	**Quality of life score (range 0-10), mean (SE)** *@ 12 mths* G1: 6.4 (0.13) G2: 6.0 (0.13) Betw-grp diff: +0.42 (0.13 to 0.71); p = 0.005	*@ 6 mths* G1: 8 (1.6) G2: 6 (1.2) *@ 12 mths* G1: 22 (4.3) G2: 15 (3.0)

First author, year Trial name Country Funding source	Self-reported physical health status	Physical health-related quality of life	Mortality, N (%) deaths (all-cause unless otherwise specified)
Fann, 2009[17] IMPACT: cancer (secondary analyses) US Multiple sources	NR	**Quality of life score (range 0-10), mean (SD/SE?):** *@ baseline:* Overall: 5.42 (0.15) G1: 5.39 (0.21) G2: 5.45 (0.20) p = 0.855 *@ 6 mths* Overall: 6.03 (0.19) G1: 6.30 (0.25) G2: 5.74 (0.25) p = 0.097 *@ 12 mths* Overall: 6.32 (0.16) G1: 6.67 (0.23) G2: 5.95 (0.24) p = 0.039 *@ 18 mths* Overall: 5.86 (0.18) G1: 6.33 (0.25) G2: 5.35 (0.24) p = 0.009 *@ 24 mths* Overall: 6.20 (0.19) G1: 6.51 (0.25) G2: 5.84 (0.29) p = 0.117	*@ 6 mths* G1: 5 (4.5) G2: 3 (2.9) *@ 12 mths* G1: 11 (9.8) G2: 9 (8.7) *@ 18 mths* G1: 13 (11.6) G2: 13 (12.6) *@ 24 mths* G1: 15 (13.4) G2: 17 (16.5)
Williams, 2004[18] Katon, 2006[19] IMPACT: diabetes (secondary analyses) US Multiple sources	**SF-12, Physical** Between group diff: +3.21 (1.78 to 4.63) favoring G1	NR	*@ 6 mths* G1: 4 (2.0) G2: 10 (4.7) *@ 12 mths* G1: 12 (5.9) G2: 12 (5.7)

a G1 = intervention arm; G2 = control arm

Abbreviations: Adj, adjusted; BL, baseline; CI, confidence interval; CM, chronic medical; diff, difference; FACT, Functional Assessment of Cancer Therapy; GCPS, Graded Chronic Pain Scale; mths, months; NR, not reported; QWB-SA, Quality of Well-being Self-administered; SD, standard deviation; SE, standard error; US, United States

Evidence Table 12. Chronic medical condition outcomes: health care utilization and other outcomes, including harms

First author, year Trial name Country Funding source	Health care utilization	Other outcomes
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	NR	NR
Ell, 2008[2] ADAPt-C US Government	NR	NR
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	NR	**Financial Situation Getting Worse, mean (SD):** *@ BL* G1: 0.43 (0.50) G2: 0.30 (0.46) p = 0.06 *@ 6 mths* G1: 0.15 (0.35) G2: 0.28 (0.45) p = <0.001 *@ 12 mths* G1: 0.17 (0.38) G2: 0.24 (0.43) p = 0.02 *@ 18 mths* G1: 0.36 (0.48) G2: 0.28 (0.45) p = 0.41
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	NR	**≥1 disenrollment period from the health plan @ 5 yrs** G1: 56(33.9%) G2: 59 (36.0%)

First author, year Trial name Country Funding source	Health care utilization	Other outcomes
Katon, 2010[10] TEAMcare US Multiple sources	**N (%) with ≥1 hospitalization** G1: 27 (25.5%) G2: 23 (21.3%)	**N(%) with ≥1 moderate AE** G1: 18 (17) G2: 3 (2.8) **N(%) with ≥1 mild AE** G1: 2 (1.9) G2: 0 (0) Mild and moderate AE included falls, medication side effects, extremely high lab values, ER visit for chest pain or neurologic symptoms
Pyne, 2011[11] HITIDES US Government	NR	NR
Rollman, 2009[12] Bypassing the Blues US Government	**Total rehospitalizations:** G1: 85 (men = 34; women = 51) G2: 68 (men = 46; women = 22) Between-group difference, p = 0.86 **Cardiac/cardiovascular rehospitalizations** G1: 31 (men = 12; women = 19) G2: 35 (men = 25; women = 10) **Non-cardiac/cardiovascular rehospitalizations** G1: 53 (men = 21; women = 32) G2: 33 (men = 21; women = 12)	NR
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	NR	NR
Vera, 2010[14] NA Puerto Rico Government	NR	NR
Lin, 2006[15] Lin, 2003[16] IMPACT: arthritis (secondary analyses) US Multiple sources	NR	NR

First author, year Trial name Country Funding source	Health care utilization	Other outcomes
Fann, 2009[17] IMPACT: cancer (secondary analyses) US Multiple sources	NR	NR
Williams, 2004[18] Katon, 2006[19] IMPACT: diabetes (secondary analyses) US Multiple sources	NR	NR

[a] G1 = intervention arm; G2 = control arm

Abbreviations: AE, adverse event; BL, baseline; CI, confidence interval; CM, chronic medical; ER, emergency room; mths, months; NR, not reported; OR, odds ratio; SD, standard deviation; SE, standard error; US, United States; yrs, years

Evidence Table 13. System factors

First author, year Trial name Country Funding source	Size Type[a] Urban/rural/mixed	IT/EMR features	Payer mix Other payment details	Other
Dwight-Johnson, 2005[1] Multifaceted Oncology Depression Program US Government	Public sector breast and GYN oncology clinics Open system NR	NR	NR Medication and problem-solving therapy costs were covered by the study.	Patients were low income.
Ell, 2008[2] ADAPt-C US Government	Public sector oncology clinics - Medical Oncology, Radiation, GYN Oncology Open system NR	NR	NR Participants were reimbursed for time spent completing outcome interviews and for transportation and copays for antidepressant medication if applicable.	Spanish-speaking research staff and study materials in English and Spanish; phone intervention and data collection option; evening and weekend availability for visits; study participants were low income
Ell, 2010[3] Multifaceted Diabetes and Depression Program US Government	2 public safety-net community clinics: 1 PCP-like and 1 catering to diabetic patients who are referred by PCP Open system NR	NR	Insurance (%): G1: Medi-cal/Medicare: 17.6 County-funded program: 61.1 None: 21.2 G2: Medi-Cal/Medicare: 18.6 County-funded program: 58.2 None: 21.1 NR	Safety net clinics; participants were described as low-income.

First author, year Trial name Country Funding source	Size Type[a] Urban/rural/mixed	IT/EMR features	Payer mix Other payment details	Other
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways US Government	9 primary care clinics of Group Health Cooperative (non-profit HMO) serving 500,000 members in Washington and Idaho Closed system NR	IT system for clinical, cost, and utilization measures	Patients were members of Group Health Cooperative, a mixed-model prepaid health plan serving 500,000 members in Washington and Idaho. NR	
Katon, 2010[10] TEAMcare US Multiple sources	14 PC clinics in Washington state Closed system NR	EMR system in place	Patients were members of Group Health Cooperative, a mixed-model prepaid health plan NR	
Pyne, 2011[11] HITIDES US Government	3 VA HIV clinics Closed system NR	The depression care team communicated with treating clinicians via EMR progress notes; Prewritten scripts and standardized instruments were supported by the Web-based decision support system during the telephone encounters with patients. Scripted computer-based assessments used at baseline, 6 and 12 months.	NR Free to patients through VA system	

First author, year Trial name Country Funding source	Size Type[a] Urban/rural/mixed	IT/EMR features	Payer mix Other payment details	Other
Rollman, 2009[12] Bypassing the Blues US Government	NR; intervention was telephone-based Open system NA	Data and safety monitoring done electronically; searched for HRSD increase of 25% or more; this triggered a written letter to the treating PCP and offer to identify local MH specialists and provide additional treatment advice.	NR NR	
Strong, 2008[13] SMaRT Oncology 1 United Kingdom Foundation	Regional NHS cancer center that served 1.5 million people in southeast Scotland Open system NR	NR	National Health Service Free to patients through NHS.	
Vera, 2010[14] NA Puerto Rico Government	14 internal med or PC clinics from 4 health care orgs, inc independent provider associations, HMOs, a regional health insurance plan, and academically affiliated practices Open system NR	NR	NR Costs for medication and CBT were covered by the study.	

First author, year Trial name Country Funding source	Size Type[a] Urban/rural/mixed	IT/EMR features	Payer mix Other payment details	Other
Fann, 2009[17] Lin, 2006[15] Lin, 2003[16] Williams, 2004[18] Katon, 2006[19] IMPACT(secondary analyses) US Multiple sources	18 PC clinics from 8 health care organizations in 5 states Mixed systems (PGP, VA, AGP, HMO, IPA) Mixed	Web-based clinical information system in place	Mixed (<10% to 100% capitated plus one VA clinic) Mixed rates of capitation and types of mental health care financing	Some clinics had mental health practitioner on-site; others did not.

[a] A "closed" system is one in which elements are accessible to patients who are members of the organization operating the system. An "open" system is one in which patients are free to choose any provider, regardless of organizational system or network.

Abbreviations: AGP, academic group practice; CBT, Cognitive-behavioral Therapy; EMR, electronic medical record; HMO, health maintenance organization; HRSD, Hamilton Rating Scale for Depression; IPA, independent provider association; IT, information technology; MH, mental health; NHS, National Health Service; NR, not reported; PC, primary care; PCP, primary care provider; PGP, private group practice; US, United States, VA, Veterans' Affairs

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Appendix D. Quality Assessment

Appendix D. Quality Assessment

This appendix describes the criteria relating to internal validity and the procedures that topic teams follow for all updates and new assessments in making these judgments.

All topic teams use initial "filters" to select studies for review that deal most directly with the question at issue and that are applicable to the population at issue. Thus, studies of any design that use outdated technology or that use technology that is not feasible for primary care practice may be filtered out before the abstraction stage, depending on the topic and the decisions of the topic team. The teams justify such exclusion decisions if there could be reasonable disagreement about this step. The criteria below are meant for those studies that pass this initial filter.

Presented below are a set of minimal criteria for each study design and then a general definition of three categories: "good," "fair," and "poor," based on those criteria. These specifications are not meant to be rigid rules but rather are intended to be general guidelines, and individual exceptions, when explicitly explained and justified, can be made. In general, a "good" study is one that meets all criteria well. A "fair" study is one that does not meet (or it is not clear that it meets) at least one criterion but has no known "fatal flaw." "Poor" studies have at least one fatal flaw.

Systematic Reviews

Criteria:

- Comprehensiveness of sources considered/search strategy used
- Standard appraisal of included studies
- Validity of conclusions
- Recency and relevance are especially important for systematic reviews

Definition of Ratings From Above Criteria:

Good: Recent, relevant review with comprehensive sources and search strategies; explicit and relevant selection criteria; standard appraisal of included studies; and valid conclusions.

Fair: Recent, relevant review that is not clearly biased but lacks comprehensive sources and search strategies.

Poor: Outdated, irrelevant, or biased review without systematic search for studies, explicit selection criteria, or standard appraisal of studies.

Case-Control Studies

Criteria:

- Accurate ascertainment of cases
- Nonbiased selection of cases/controls with exclusion criteria applied equally to both
- Response rate
- Diagnostic testing procedures applied equally to each group
- Measurement of exposure accurate and applied equally to each group
- Appropriate attention to potential confounding variables

Definition of Ratings Based on Criteria Above:

Good: Appropriate ascertainment of cases and nonbiased selection of case and control participants; exclusion criteria applied equally to cases and controls; response rate equal to or greater than 80 percent; diagnostic procedures and measurements accurate and applied equally to cases and controls; and appropriate attention to confounding variables.

Fair: Recent, relevant, without major apparent selection or diagnostic work-up bias but with response rate less than 80 percent or attention to some but not all important confounding variables.

Poor: Major selection or diagnostic work-up biases, response rates less than 50 percent, or inattention to confounding variables.

Randomized Controlled Trials and Cohort Studies

Criteria:

- Initial assembly of comparable groups: for RCTs: adequate randomization, including first concealment and whether potential confounders were distributed equally among groups; for cohort studies: consideration of potential confounders with either restriction or measurement for adjustment in the analysis; consideration of inception cohorts
- Maintenance of comparable groups (includes attrition, cross-overs, adherence, contamination)
- Important differential loss to follow-up or overall high loss to follow-up
- Measurements: equal, reliable, and valid (includes masking of outcome assessment)
- Clear definition of interventions
- All important outcomes considered
- Analysis: adjustment for potential confounders for cohort studies, or intention to treat analysis for RCTs.

Definition of Ratings Based on Above Criteria:

Good: Meets all criteria: Comparable groups are assembled initially and maintained throughout the study (follow-up at least 80 percent); reliable and valid measurement instruments are used and applied equally to the groups; interventions are spelled out clearly; all important outcomes are considered; and appropriate attention to confounders in analysis. In addition, for RCTs, intention to treat analysis is used.

Fair: Studies will be graded "fair" if any or all of the following problems occur, without the fatal flaws noted in the "poor" category below: Generally comparable groups are assembled initially but some question remains whether some (although not major) differences occurred with follow-up; measurement instruments are acceptable (although not the best) and generally applied equally; some but not all important outcomes are considered; and some but not all potential confounders are accounted for. Intention to treat analysis is done for RCTs.

Poor: Studies will be graded "poor" if any of the following fatal flaws exists: Groups assembled initially are not close to being comparable or maintained throughout the study; unreliable or invalid measurement instruments are used or not applied at all equally among groups (including not masking outcome assessment); and key confounders are given little or no attention. For RCTs, intention to treat analysis is lacking.

Diagnostic Accuracy Studies

Criteria:

- Screening test relevant, available for primary care, adequately described
- Study uses a credible reference standard, performed regardless of test results
- Reference standard interpreted independently of screening test
- Handles indeterminate results in a reasonable manner
- Spectrum of patients included in study
- Sample size
- Administration of reliable screening test

Definition of Ratings Based on Above Criteria:

Good: Evaluates relevant available screening test; uses a credible reference standard; interprets reference standard independently of screening test; reliability of test assessed; has few or handles indeterminate results in a reasonable manner; includes large number (more than 100) broad-spectrum patients with and without disease.

Fair: Evaluates relevant available screening test; uses reasonable although not best standard; interprets reference standard independent of screening test; moderate sample size (50 to 100 subjects) and a "medium" spectrum of patients.

Poor: Has fatal flaw such as: Uses inappropriate reference standard; screening test improperly administered; biased ascertainment of reference standard; very small sample size or very narrow selected spectrum of patients.

Criteria for Assessing External Validity (Generalizability) of Individual Studies

Each study that is identified as one that provides evidence to answer a KQ is assessed by according to its external validity (generalizability) using the following criteria.

Study Population:

The degree to which the people who were involved as subjects in the study constitute a special population because they were selected from a larger eligible population or were for other reasons unrepresentative of people who are likely to seek or be candidates for the preventive service. The selection has the potential to affect the following:

- absolute risk: The background rate of outcomes in the study could be greater or less than what might be expected in asymptomatic people because of the inclusion/exclusion criteria, because of non-participation, or for other reasons.
- harms: The harms observed in the study could be greater or less than what might be expected in asymptomatic people.
- The following are features of the study population and the study design that may cause experience in the study to be different from what would be observed in the US primary care population:

- demographics (age, gender, ethnicity, education, income): The criteria for inclusion/exclusion or non-participation do not encompass the range of people likely to be candidates for the preventive services in the US primary care population.
- co-morbidities: the frequency of co-morbid conditions in the study population does not represent of the frequency likely to be encountered in people who seek the preventive service in the U.S. primary care population.
- special inclusion/exclusion criteria: There are other special inclusion/exclusion criteria that make the study population unrepresentative.
- refusal rate (ratio of included to not-included but eligible participants): The refusal rate among eligible study subjects is high, making the enrollees in the study unrepresentative even of the people eligible for the study.
- adherence (run-in phase, frequent contact to monitor adherence): The design of the study has features that may make the effect of the intervention in the study greater than it would be in a clinically observed population.
- stage in natural history of disease; severity of disease: the selection of subjects for the study includes people with at a stage that is earlier or later than would be found in people who are candidates for the preventive service.
- source, intensity of recruitment: The sources for recruiting subjects for the study and/or the effort and intensity of recruitment may distort the characteristics of the study subjects in ways that could increase the effect of the intervention as it is observed in the study.

Situation:

The degree to which the clinical experience in the situation in which the study was conducted is likely to be reproduced in other settings

- healthcare system: The clinical experience in the system in which the study was conducted is not likely to be the same as experience in other systems because, for example, the system provides essential services for free when these services are only available at a high cost in other systems.
- country: The clinical experience in the country in which the study was conducted is not likely to be the same as in the U.S. because, for example, services available in the U.S. are not widely available in the other country of study conduct or vice versa.
- selection of participating centers: The clinical experience in which the study was conducted is not likely to be same as in offices/hospitals/settings in which the service will be delivered to the U.S. primary care population because, for example, the centers have ancillary services not available generally.
- time, effort, and system cost for the intervention: The time, effort, and cost to develop the service in the study is more than would be available outside the study setting.

Providers:

The degree to which the providers in the study have the skills and expertise likely to be available in general settings

- training to implement the intervention: The intervention in the study was done after giving providers special training not likely to be available or required in U.S. primary care settings

- expertise, skill to implement intervention: The providers included in the study had expertise and/or skills at a level that is higher than the level likely to be encountered in typical settings.
- ancillary providers: The study intervention relied on ancillary providers who are not likely to be available in typical settings.

Global Rating of External Validity (Generalizability):

External validity is rated "good" if the study differs minimally from the US primary care population/ situation/ providers and only in ways that are unlikely to affect the outcome; it is highly probable (>90%) that the clinical experience with the intervention observed in the study will be attained in the US primary care setting.

External validity is rated "fair" if the study differs from the US primary care population/ situation/ providers in a few ways that have the potential to affect the outcome in a clinically important way; it is only moderately probable (50%-89%) that the clinical experience with the intervention in the study will be attained in the US primary care setting.

External validity is rated "poor" if the study differs from the US primary care population/ situation/ providers in many way that have a high likelihood of affecting the clinical outcomes; the probability is low (<50%) that the clinical experience with the intervention observed in the study will be attained in the US primary care setting.

Table D-1. Quality ratings for efficacy / effectiveness trials

First author, year Trial name	Was randomization adequate?	Was allocation concealment adequate?	Were groups similar at baseline?	Were outcome assessors masked?	Were care providers masked?	Were patients masked?	Was overall attrition ≥20%?	Was differential attrition ≥15%?	Did the study use ITT analyses?	Were outcome measures equal, valid, and reliable?	Efficacy / Effectiveness quality rating
Dwight-Johnson, 2005[1] MODP	Yes	Yes	Yes	Yes	No	No	Yes[a]	Yes	Modified ITT	Yes	Fair
Ell, 2008[2] ADAPt-C	Yes	Yes	Yes	Yes	No	No	Yes[a]	No	Modified ITT	Yes	Fair
Ell, 2010[3] MDDP	Yes	Yes	No	Unclear/NR	No	No	Yes	No	No	Yes	Fair
Katon, 2004[4] Katon, 2008[5] Simon, 2007[6] Kinder, 2006[7] Ciechanowski, 2006[8] Lin, 2006[9] Pathways	Yes	Yes	Yes	Yes	No	No	No	No	Varied by outcome	Yes	Fair
Katon, 2010[10] TEAMcare	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes	Fair
Pyne, 2011[11] HITIDES	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Good
Rollman, 2009[12] Bypassing the Blues	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Good
Strong, 2008[13] SMaRT Oncology 1	Yes	Yes	Yes	Yes	No	No	No	No	Modified ITT	Yes	Fair
Vera, 2010[14] NA	Yes	Yes	Yes	Yes	No	No	No	No	Yes	Yes	Good

First author, year Trial name	Was randomization adequate?	Was allocation concealment adequate?	Were groups similar at baseline?	Were outcome assessors masked?	Were care providers masked?	Were patients masked?	Was overall attrition ≥20%?	Was differential attrition ≥15%?	Did the study use ITT analyses?	Were outcome measures equal, valid, and reliable?	Efficacy / Effectiveness quality rating
Williams, 2004[15] Fann, 2009[16] Lin, 2006[17] Katon, 2006[18] Lin, 2003[19] IMPACT (secondary analyses)	No[b]	Yes	Yes	Yes	No	No	No	No	Modified ITT	Yes	Fair

[a] Although attrition rate was high, the study population was patients with cancer – a population known to experience higher dropout rates for multiple reasons;

[b] Although randomization effect was lost by conducting post-randomization subgroup analyses, baseline characteristics were well-match between intervention and control arms. Quality rating was performed for each chronic condition subset, and the results did not vary.

Abbreviations: MDDP, Multifaceted Diabetes and Depression program; MODP, Multifaceted Oncology Depression Program; NR, not reported

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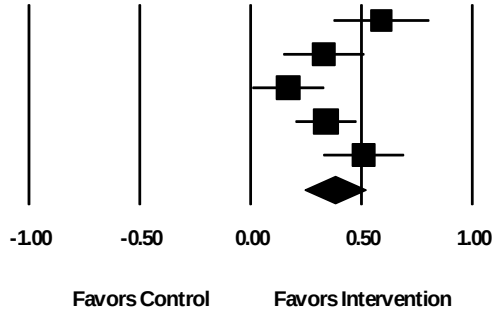
Appendix E. Meta-Analyses

Appendix E. Meta-Analyses

Depression Symptom Improvement at 6 Months

Studyname	Chronic Medical Condition	Statistics for each study		
		Difference in means	Lower limit	Upper limit
SMaRT Oncology 1 (Strong, 2008)	Cancer	0.59	0.37	0.81
IMPACT (Fann, 2009)	Cancer	0.33	0.14	0.52
Pathways (Katon, 2004)	Diabetes	0.17	0.01	0.33
IMPACT (Williams, 2004)	Diabetes	0.34	0.20	0.48
TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.51	0.33	0.69
		0.38	0.24	0.51



Note: All trials measured depressive symptoms with the Hopkins Symptom Checklist (HSCL).

Measures of Heterogeneity

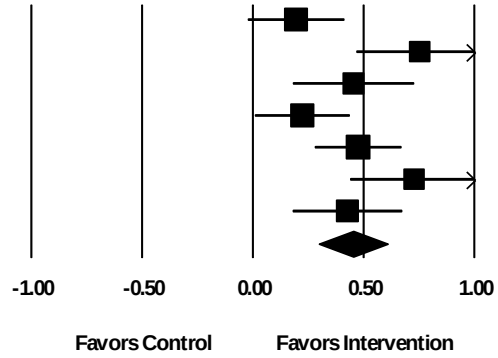
Q-value	df (Q)	P-value	I-squared
12.101	4	0.017	66.944

Depression Symptom Improvement at 6 Months - WMD

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**WMD**	**Lower limit**	**Upper limit**	**p-Value**
	SMaRT Oncology 1 (Strong, 2008)	Cancer	0.334	0.203	0.464	0.000
	IMPACT (Fann, 2009)	Cancer	0.392	0.219	0.566	0.000
	Pathways (Katon, 2004)	Diabetes	0.428	0.308	0.548	0.000
	IMPACT (Williams, 2004)	Diabetes	0.393	0.206	0.579	0.000
	TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.346	0.194	0.498	0.000
Random			0.378	0.241	0.515	0.000

Depression Symptom Improvement at 6 Months

Studyname	Chronic Medical Condition	Std diff in means	Lower limit	Upper limit
ADAPt-C (Ell, 2008)	Cancer	0.20	-0.03	0.42
SMaRT Oncology 1 (Strong, 2008)	Cancer	0.75	0.46	1.04
IMPACT (Fann, 2009)	Cancer	0.45	0.18	0.73
Pathways (Katon, 2004)	Diabetes	0.22	0.01	0.44
IMPACT (Williams, 2004)	Diabetes	0.48	0.28	0.67
TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.73	0.44	1.02
Bypassing the Blues (Rollman, 2009)	Heart Disease	0.43	0.18	0.68
		0.45	0.29	0.61



Notes: The ADAPt-C trial measured depressive symptoms with the Patient Health Questionnaire (PHQ-9); the Bypassing the Blues trial used the Hamilton Rating Scale for depression (HAM-D); all other trials used the Hopkins Symptom Checklist (HSCL). The Bypassing the Blues data are from the 8-month endpoint.

Measures of Heterogeneity

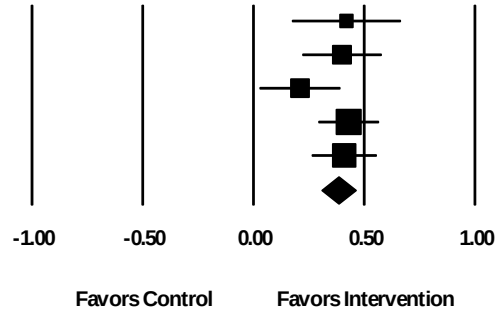
Q-value	df (Q)	P-value	I-squared
16.912	6	0.010	64.522

Depression Symptom Improvement at 6 Months - SMD

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**SMD**	**Lower limit**	**Upper limit**	**p-Value**
	ADAPt-C (Ell, 2008)	Cancer	0.494	0.338	0.651	0.000
	SMaRT Oncology 1 (Strong, 2008)	Cancer	0.404	0.256	0.551	0.000
	IMPACT (Fann, 2009)	Cancer	0.452	0.272	0.632	0.000
	Pathways (Katon, 2004)	Diabetes	0.491	0.328	0.655	0.000
	IMPACT (Williams, 2004)	Diabetes	0.449	0.259	0.638	0.000
	TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.408	0.256	0.561	0.000
	Bypassing the Blues (Rollman, 2009)	Heart Disease	0.457	0.273	0.640	0.000
Random			0.450	0.295	0.605	0.000

Depression Symptom Improvement at 12 Months

Studyname	Chronic Medical Condition	Statistics for each study		
		Difference in means	Lower limit	Upper limit
SMaRT Oncology 1 (Strong, 2008)	Cancer	0.42	0.17	0.67
IMPACT (Fann, 2009)	Cancer	0.40	0.22	0.58
Pathways (Katon, 2004)	Diabetes	0.21	0.03	0.39
IMPACT (Williams, 2004)	Diabetes	0.43	0.29	0.57
TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.41	0.26	0.56
		0.38	0.30	0.46



Note: All trials measured depressive symptoms with the Hopkins Symptom Checklist (HSCL).

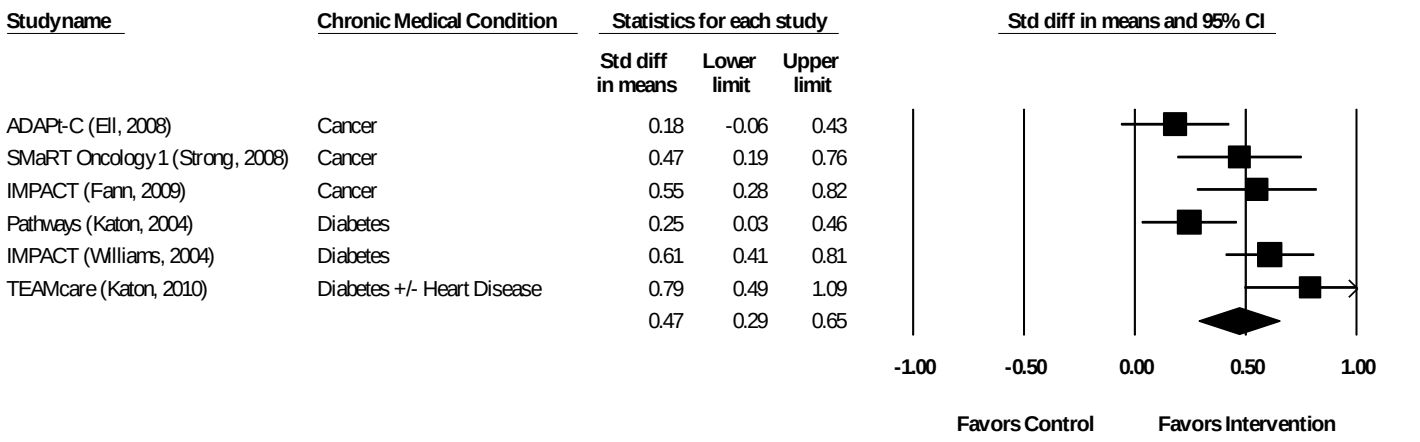
Measures of Heterogeneity

Q-value	df (Q)	P-value	I-squared
4.044	4	0.400	1.094

Depression Symptom Improvement at 12 Months - WMD

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**WMD**	**Lower limit**	**Upper limit**	**p-Value**
	SMaRT Oncology 1 (Strong, 2008)	Cancer	0.374	0.281	0.466	0.000
	IMPACT (Fann, 2009)	Cancer	0.373	0.274	0.472	0.000
	Pathways (Katon, 2004)	Diabetes	0.416	0.333	0.500	0.000
	IMPACT (Williams, 2004)	Diabetes	0.360	0.262	0.457	0.000
	TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.368	0.265	0.471	0.000
Random			0.381	0.304	0.458	0.000

Depression Symptom Improvement at 12 Months



Note: The ADAPt-C trial measured depressive symptoms with the Patient Health Questionnaire (PHQ-9); all other trials used the Hopkins Symptom Checklist (HSCL).

Measures of Heterogeneity

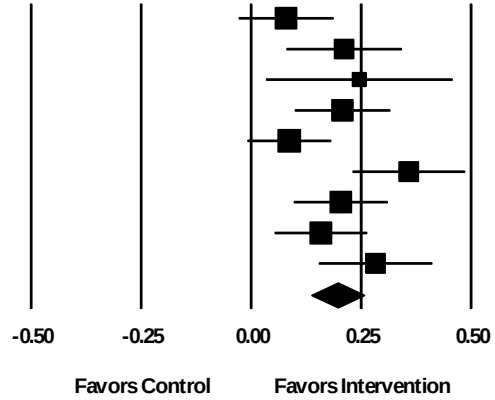
Q-value	df (Q)	P-value	I-squared
15.898	5	0.007	68.549

Depression Symptom Improvement at 12 Months - SMD

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**SMD**	**Lower limit**	**Upper limit**	**p-Value**
	ADAPt-C (Ell, 2008)	Cancer	0.523	0.345	0.702	0.000
	SMaRT Oncology 1 (Strong, 2008)	Cancer	0.468	0.251	0.685	0.000
	IMPACT (Fann, 2009)	Cancer	0.453	0.238	0.667	0.000
	Pathways (Katon, 2004)	Diabetes	0.516	0.323	0.710	0.000
	IMPACT (Williams, 2004)	Diabetes	0.435	0.225	0.645	0.000
	TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.411	0.236	0.585	0.000
Random			0.467	0.286	0.649	0.000

Reduction (at least 50%) in Mental Health Score at 6 Months

Study name	Chronic Medical Condition	Statistics for each study: Risk difference	Lower limit	Upper limit
ADAPt-C (Ell, 2008)	Cancer	0.08	-0.03	0.19
IMPACT (Fann, 2009)	Cancer	0.21	0.08	0.34
MDDP (Dwight-Johnson, 2005)	Diabetes	0.25	0.03	0.46
MDDP (Ell, 2010)	Diabetes	0.21	0.10	0.32
Pathways (Katon, 2004)	Diabetes	0.09	-0.01	0.18
TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.36	0.23	0.49
Bypassing the Blues (Rollman, 2009)	Heart Disease	0.20	0.10	0.31
HITIDES (Pyne, 2011)	HIV	0.16	0.05	0.27
Vera, 2010	Multiple Conditions	0.28	0.15	0.41
		0.20	0.14	0.26



Notes: The ADAPt-C and MDDP (Dwight-Johnson, 2005) trials measured depressive symptoms with the Patient Health Questionnaire (PHQ-9); the Bypassing the Blues trial used the Hamilton Rating Scale for depression (HAM-D); all other trials used the Hopkins Symptom Checklist (HSCL). The Bypassing the Blues and MDDP (Dwight-Johnson, 2005) data are from 8-month endpoints.

Measures of Heterogeneity

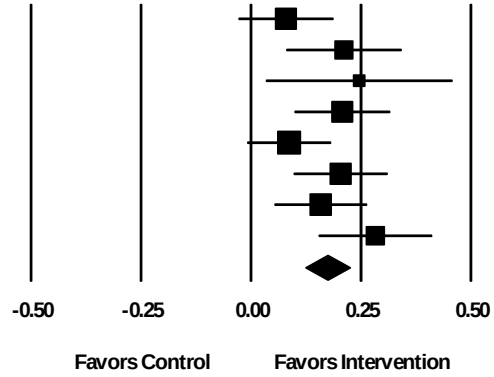
Q-value	df (Q)	P-value	I-squared
17.644	8	0.024	54.659

Reduction (at least 50%) in Mental Health Score at 6 Months

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**RD**	**Lower limit**	**Upper limit**	**p-Value**
	ADAPt-C (Ell, 2008)	Cancer	0.211	0.151	0.270	0.000
	IMPACT (Fann, 2009)	Cancer	0.194	0.128	0.261	0.000
	MDDP (Dwight-Johnson, 2005)	Diabetes	0.193	0.129	0.256	0.000
	MDDP (Ell, 2010)	Diabetes	0.195	0.127	0.263	0.000
	Pathways (Katon, 2004)	Diabetes	0.211	0.152	0.271	0.000
	TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.173	0.122	0.223	0.000
	Bypassing the Blues (Rollman, 2009)	Heart Disease	0.195	0.127	0.264	0.000
	HITIDES (Pyne, 2011)	HIV	0.202	0.133	0.270	0.000
	Vera, 2010	Multiple Conditions	0.185	0.123	0.247	0.000
Random			0.195	0.136	0.255	0.000

Reduction (at least 50%) in Mental Health Score at 6 Months

Study name	Chronic Medical Condition	Risk difference	Lower limit	Upper limit
ADAPt-C (Ell, 2008)	Cancer	0.08	-0.03	0.19
IMPACT (Fann, 2009)	Cancer	0.21	0.08	0.34
MDDP (Dwight-Johnson, 2005)	Diabetes	0.25	0.03	0.46
MDDP (Ell, 2010)	Diabetes	0.21	0.10	0.32
Pathways (Katon, 2004)	Diabetes	0.09	-0.01	0.18
Bypassing the Blues (Rollman, 2009)	Heart Disease	0.20	0.10	0.31
HITIDES (Pyne, 2011)	HIV	0.16	0.05	0.27
Vera, 2010	Multiple Conditions	0.28	0.15	0.41
		0.17	0.12	0.22



Sensitivity Analysis: Removing TEAMcare (Katon, 2010)

Notes: The ADAPt-C and MDDP (Dwight-Johnson, 2005) trials measured depressive symptoms with the Patient Health Questionnaire (PHQ-9); the Bypassing the Blues trial used the Hamilton Rating Scale for depression (HAM-D); all other trials used the Hopkins Symptom Checklist (HSCL). The Bypassing the Blues and MDDP (Dwight-Johnson, 2005) data are from 8-month endpoints.

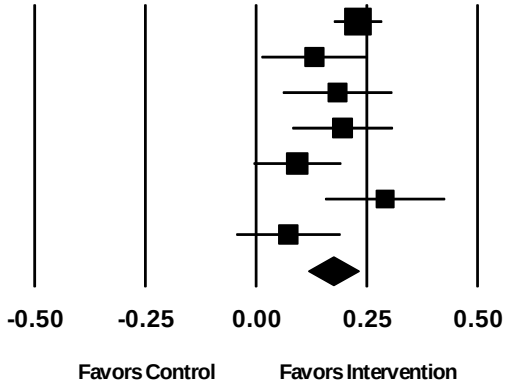
Measures of Heterogeneity			
Q-value	df (Q)	P-value	I-squared
10.111	7	0.182	30.771

Reduction (at least 50%) in Mental Health Score at 6 Months - Sensitivity Analysis Removing TEAMcare (Katon, 2010)

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**RD**	**Lower limit**	**Upper limit**	**p-Value**
	ADAPt-C (Ell, 2008)	Cancer	0.186	0.137	0.235	0.000
	IMPACT (Fann, 2009)	Cancer	0.169	0.113	0.225	0.000
	MDDP (Dwight-Johnson, 2005)	Diabetes	0.169	0.116	0.223	0.000
	MDDP (Ell, 2010)	Diabetes	0.168	0.111	0.226	0.000
	Pathways (Katon, 2004)	Diabetes	0.188	0.139	0.237	0.000
	Bypassing the Blues (Rollman, 2009)	Heart Disease	0.169	0.111	0.227	0.000
	HITIDES (Pyne, 2011)	HIV	0.177	0.117	0.236	0.000
	Vera, 2010	Multiple Conditions	0.157	0.110	0.204	0.000
Random			0.173	0.122	0.223	0.000

Reduction (at least 50%) in Mental Health Score at 12 Months

Study name	Chronic Medical Condition	Risk difference	Lower limit	Upper limit
IMPACT (Lin, 2003)	Arthritis	0.23	0.17	0.29
ADAPt-C (Ell, 2008)	Cancer	0.13	0.01	0.25
IMPACT (Fann, 2009)	Cancer	0.18	0.06	0.31
MDDP (Ell, 2010)	Diabetes	0.20	0.08	0.31
Pathways (Katon, 2004)	Diabetes	0.09	-0.01	0.19
TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.29	0.15	0.43
HITIDES (Pyne, 2011)	HIV	0.07	-0.05	0.19
		0.17	0.12	0.23



Note: The ADAPt-C trial measured depressive symptoms with the Patient Health Questionnaire (PHQ-9); all other trials used the Hopkins Symptom Checklist (HSCL).

Measures of Heterogeneity

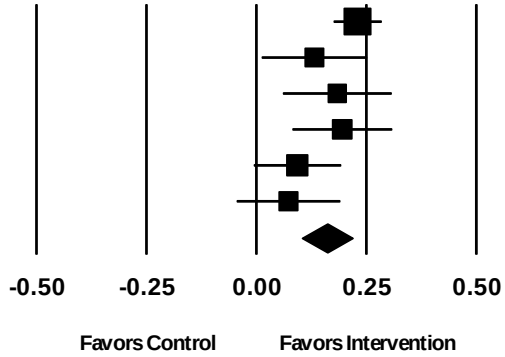
Q-value	df (Q)	P-value	I-squared
12.232	6	0.057	50.947

Reduction (at least 50%) in Mental Health Score at 12 Months

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**RD**	**Lower limit**	**Upper limit**	**p-Value**
	IMPACT (Lin, 2003)	Arthritis	0.155	0.095	0.216	0.000
	ADAPt-C (Ell, 2008)	Cancer	0.179	0.115	0.242	0.000
	IMPACT (Fann, 2009)	Cancer	0.171	0.105	0.236	0.000
	MDDP (Ell, 2010)	Diabetes	0.169	0.102	0.235	0.000
	Pathways (Katon, 2004)	Diabetes	0.189	0.132	0.245	0.000
	TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.159	0.102	0.217	0.000
	HITIDES (Pyne, 2011)	HIV	0.189	0.134	0.243	0.000
Random			0.173	0.116	0.230	0.000

Reduction (at least 50%) in Mental Health Score at 12 Months

Study name	Chronic Medical Condition	Risk difference	Lower limit	Upper limit
IMPACT (Lin, 2003)	Arthritis	0.23	0.17	0.29
ADAPt-C (Ell, 2008)	Cancer	0.13	0.01	0.25
IMPACT (Fann, 2009)	Cancer	0.18	0.06	0.31
MDDP (Ell, 2010)	Diabetes	0.20	0.08	0.31
Pathways (Katon, 2004)	Diabetes	0.09	-0.01	0.19
HITIDES (Pyne, 2011)	HIV	0.07	-0.05	0.19
		0.16	0.10	0.22



Sensitivity Analysis: Removing TEAMcare (Katon, 2010)

Note: The ADAPt-C trial measured depressive symptoms with the Patient Health Questionnaire (PHQ-9); all other trials used the Hopkins Symptom Checklist (HSCL).

Measures of Heterogeneity

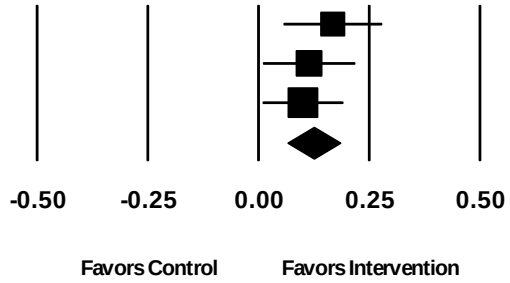
Q-value	df (Q)	P-value	I-squared
9.742	5	0.083	48.677

Reduction (at least 50%) in Mental Health Score at 12 Months - Sensitivity Analysis Removing TEAMcare (Katon, 2010)

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**RD**	**Lower limit**	**Upper limit**	**p-Value**
	IMPACT (Lin, 2003)	Arthritis	0.132	0.081	0.184	0.000
	ADAPt-C (Ell, 2008)	Cancer	0.162	0.096	0.229	0.000
	IMPACT (Fann, 2009)	Cancer	0.153	0.085	0.222	0.000
	MDDP (Ell, 2010)	Diabetes	0.151	0.082	0.220	0.000
	Pathways (Katon, 2004)	Diabetes	0.176	0.117	0.234	0.000
	HITIDES (Pyne, 2011)	HIV	0.176	0.121	0.232	0.000
Random			0.159	0.102	0.217	0.000

Remission of Depression at 6 Months

Study name	Chronic Medical Condition	Statistics for each study		
		Risk difference	Lower limit	Upper limit
IMPACT (Fann, 2009)	Cancer	0.168	0.055	0.280
MDDP (Ell, 2010)	Diabetes	0.114	0.009	0.220
HITIDES (Pyne, 2011)	HIV	0.100	0.008	0.193
		0.123	0.064	0.183



Note: All included studies defined remission as SCL-20 < 0.5.

Measures of Heterogeneity

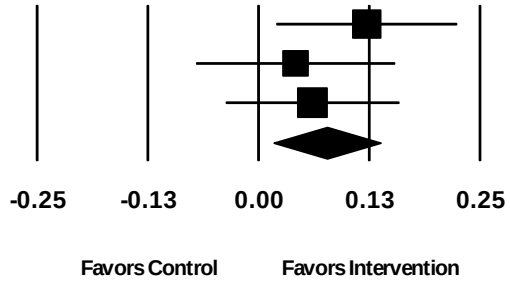
Q-value	df (Q)	P-value	I-squared
0.860	2	0.650	0.000

Remission of Depression at 6 Months

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**RD**	**Lower limit**	**Upper limit**	**p-Value**
	IMPACT (Fann, 2009)	Cancer	0.107	0.037	0.176	0.003
	MDDP (Ell, 2010)	Diabetes	0.128	0.056	0.199	0.000
	HITIDES (Pyne, 2011)	HIV	0.139	0.062	0.216	0.000
Random			0.123	0.064	0.183	0.000

Remission of Depression at 12 Months

Study name	Chronic Medical Condition	Statistics for each study		
		Risk difference	Lower limit	Upper limit
IMPACT (Fann, 2009)	Cancer	0.122	0.020	0.225
MDDP (Ell, 2010)	Diabetes	0.042	-0.071	0.155
HITIDES (Pyne, 2011)	HIV	0.061	-0.038	0.160
		0.077	0.016	0.137



Note: All included studies defined remission as SCL-20 < 0.5.

Measures of Heterogeneity

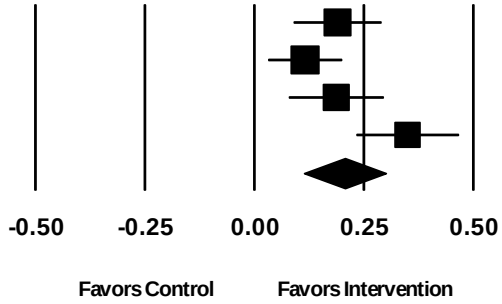
Q-value	df (Q)	P-value	I-squared
1.218	2	0.544	0.000

Remission of Depression at 12 Months

Model	Study name	Chronic Medical Condition	Statistics with study removed			
			RD	Lower limit	Upper limit	p-Value
	IMPACT (Fann, 2009)	Cancer	0.053	-0.022	0.127	0.164
	MDDP (Ell, 2010)	Diabetes	0.090	0.019	0.161	0.013
	HITIDES (Pyne, 2011)	HIV	0.086	0.007	0.164	0.032
Random			0.077	0.016	0.137	0.013

Mental Health Treatment Satisfaction at 12 Months

Study name	Chronic Medical Condition	Risk difference	Lower limit	Upper limit
IMPACT (Fann, 2009)	Cancer	0.190	0.088	0.292
MDDP (Ell, 2010)	Diabetes	0.116	0.030	0.202
Pathways (Katon, 2004)	Diabetes	0.187	0.077	0.297
TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.350	0.232	0.468
		0.205	0.112	0.299



Note: Treatment satisfaction was measured as follows:

MDDP: care was rated "satisfied" to "very satisfied"
Pathways: care was rated "moderately satisfied" to "very satisfied"
TEAMcare: care was rated "very satisfied" to "extremely satisfied"
IMPACT: care was rated "good" or "excellent"

Measures of Heterogeneity

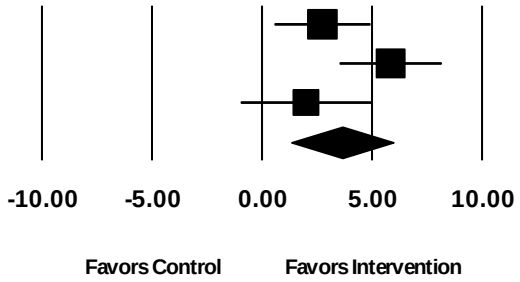
Q-value	df (Q)	P-value	I-squared
9.878	3	0.020	69.629

Mental Health Treatment Satisfaction at 12 Months

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**RD**	**Lower limit**	**Upper limit**	**p-Value**
	IMPACT (Fann, 2009)	Cancer	0.213	0.080	0.346	0.002
	MDDP (Ell, 2010)	Diabetes	0.239	0.138	0.340	0.000
	Pathways (Katon, 2004)	Diabetes	0.214	0.084	0.343	0.001
	TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.157	0.101	0.214	0.000
Random			0.205	0.112	0.299	0.000

Mental Health Status at 6 Months

Study name	Chronic Medical Condition	Difference in means	Lower limit	Upper limit
ADAPt-C (Ell, 2008)	Cancer	2.75	0.55	4.95
MDDP (Ell, 2010)	Diabetes	5.85	3.51	8.19
HITIDES (Pyne, 2011)	HIV	2.00	-0.99	4.99
		3.62	1.30	5.94



Notes: Mental health status was measured with the 12-Item Short Form Survey from the RAND Medical Outcomes Study (SF-12) for all trials.

Measures of Heterogeneity

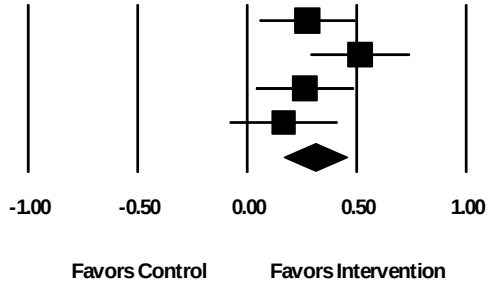
Q-value	df (Q)	P-value	I-squared
5.199	2	0.074	61.531

Mental Health Status at 6 Months - WMD

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**WMD**	**Lower limit**	**Upper limit**	**p-Value**
	ADAPt-C (Ell, 2008)	Cancer	4.041	0.275	7.807	0.035
	MDDP (Ell, 2010)	Diabetes	2.486	0.714	4.258	0.006
	HITIDES (Pyne, 2011)	HIV	4.273	1.236	7.311	0.006
Random			3.619	1.303	5.935	0.002

Mental Health Status at 6 Months

Studyname	Chronic Medical Condition	Std diff in means	Lower limit	Upper limit
ADAPt-C (Ell, 2008)	Cancer	0.27	0.05	0.50
MDDP (Ell, 2010)	Diabetes	0.52	0.29	0.74
Bypassing the Blues (Rollman, 2009)	Heart Disease	0.26	0.04	0.49
HITIDES (Pyne, 2011)	HIV	0.17	-0.08	0.42
		0.31	0.16	0.45



Notes: Mental health status was measured with the 12-Item Short Form Survey from the RAND Medical Outcomes Study (SF-12) for all trials except Bypassing the Blues, which used the SF-36. The Bypassing the Blues data are from the 8-month endpoint.

Measures of Heterogeneity

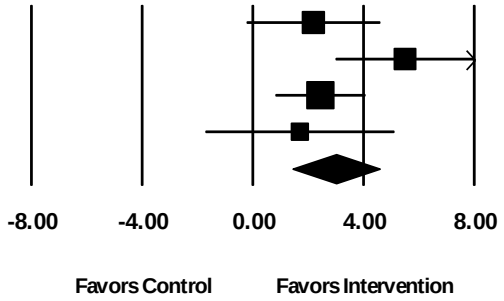
Q-value	df (Q)	P-value	I-squared
4.638	3	0.200	35.313

Mental Health Status at 6 Months - SMD

Model	Study name	Chronic Medical Condition	Statistics with study removed			
			SMD	Lower limit	Upper limit	p-Value
	ADAPt-C (Ell, 2008)	Cancer	0.319	0.115	0.522	0.002
	MDDP (Ell, 2010)	Diabetes	0.240	0.106	0.373	0.000
	Bypassing the Blues (Rollman, 2009)	Heart Disease	0.322	0.123	0.522	0.002
	HITIDES (Pyne, 2011)	HIV	0.350	0.190	0.510	0.000
Random			0.308	0.165	0.452	0.000

Mental Health Status at 12 Months

Study name	Chronic Medical Condition	Statistics for each study		
		Difference in means	Lower limit	Upper limit
ADAPt-C (Ell, 2008)	Cancer	2.19	-0.24	4.62
MDDP (Ell, 2010)	Diabetes	5.50	2.97	8.03
IMPACT (Williams, 2004)	Diabetes	2.44	0.80	4.08
HITIDES (Pyne, 2011)	HIV	1.70	-1.73	5.13
		2.98	1.41	4.55



Note: Mental health status was measured with the 12-Item Short Form Survey from the RAND Medical Outcomes Study (SF-12) for all trials.

Measures of Heterogeneity

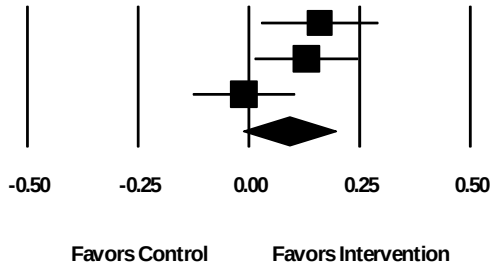
Q-value	df (Q)	P-value	I-squared
5.152	3	0.161	41.772

Mental Health Status at 12 Months

Model	Study name	Chronic Medical Condition	Statistics with study removed			p-Value
			WMD	Lower limit	Upper limit	
	ADAPt-C (Ell, 2008)	Cancer	3.261	1.088	5.433	0.003
	MDDP (Ell, 2010)	Diabetes	2.272	1.005	3.538	0.000
	IMPACT (Williams, 2004)	Diabetes	3.249	0.848	5.650	0.008
	HITIDES (Pyne, 2011)	HIV	3.250	1.342	5.159	0.001
Random			2.983	1.413	4.553	0.000

Prescription Antidepressant Use at 6 Months

Studyname	Chronic Medical Condition	Risk difference	Lower limit	Upper limit
IMPACT (Fann, 2009)	Cancer	0.160	0.026	0.294
Bypassing the Blues (Rollman, 2009)	Heart Disease	0.130	0.012	0.248
HITIDES (Pyne, 2011)	HIV	-0.011	-0.128	0.106
		0.090	-0.015	0.195



Note: The Bypassing the Blues data are from the 8-month endpoint.

Measures of Heterogeneity

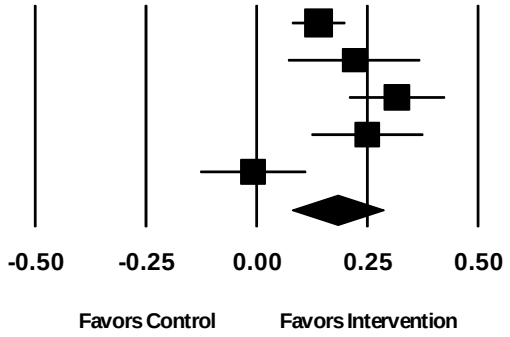
Q-value	df (Q)	P-value	I-squared
4.368	2	0.113	54.216

Prescription Antidepressant Use at 6 Months

Model	Study name	Chronic Medical Condition	Statistics with study removed			p-Value
			RD	Lower limit	Upper limit	
	IMPACT (Fann, 2009)	Cancer	0.059	-0.079	0.197	0.402
	Bypassing the Blues (Rollman, 2009)	Heart Disease	0.071	-0.096	0.239	0.404
	HITIDES (Pyne, 2011)	HIV	0.143	0.055	0.232	0.002
Random			0.090	-0.015	0.195	0.092

Prescription Antidepressant Use at 12 Months

Study name	Chronic Medical Condition	Statistics for each study		
		Risk difference	Lower limit	Upper limit
IMPACT (Lin, 2003)	Arthritis	0.140	0.079	0.201
IMPACT (Fann, 2009)	Cancer	0.220	0.070	0.370
MDDP (Ell, 2010)	Diabetes	0.317	0.208	0.426
IMPACT (Williams, 2004)	Diabetes	0.250	0.122	0.378
HITIDES (Pyne, 2011)	HIV	-0.008	-0.128	0.112
		0.182	0.079	0.285



Measures of Heterogeneity

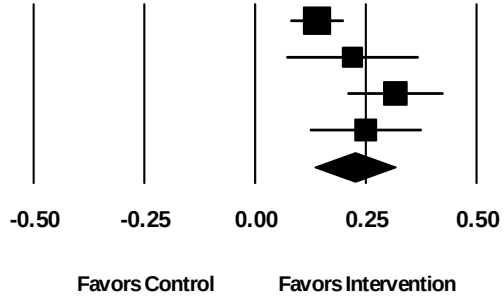
Q-value	df (Q)	P-value	I-squared
18.167	4	0.001	77.982

Prescription Antidepressant Use at 12 Months

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**RD**	**Lower limit**	**Upper limit**	**p-Value**
	IMPACT (Lin, 2003)	Arthritis	0.195	0.047	0.342	0.010
	IMPACT (Fann, 2009)	Cancer	0.174	0.051	0.297	0.005
	MDDP (Ell, 2010)	Diabetes	0.146	0.047	0.245	0.004
	IMPACT (Williams, 2004)	Diabetes	0.166	0.043	0.289	0.008
	HITIDES (Pyne, 2011)	HIV	0.224	0.133	0.315	0.000
Random			0.182	0.079	0.285	0.001

Prescription Antidepressant Use at 12 Months

Study name	Chronic Medical Condition	Statistics for each study		
		Risk difference	Lower limit	Upper limit
IMPACT (Lin, 2003)	Arthritis	0.140	0.079	0.201
IMPACT (Fann, 2009)	Cancer	0.220	0.070	0.370
MDDP (Ell, 2010)	Diabetes	0.317	0.208	0.426
IMPACT (Williams, 2004)	Diabetes	0.250	0.122	0.378
		0.224	0.133	0.315



Sensitivity Analysis: Removing HITIDES (Pyne, 2011)

Measures of Heterogeneity

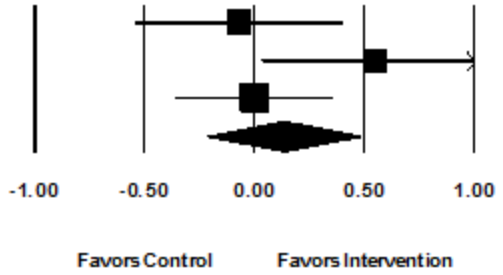
Q-value	df (Q)	P-value	I-squared
8.665	3	0.034	65.378

Prescription Antidepressant Use at 12 Months - Sensitivity Analysis Removing HITIDES (Pyne, 2011)

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**RD**	**Lower limit**	**Upper limit**	**p-Value**
	IMPACT (Lin, 2003)	Arthritis	0.273	0.200	0.345	0.000
	IMPACT (Fann, 2009)	Cancer	0.228	0.111	0.345	0.000
	MDDP (Ell, 2010)	Diabetes	0.181	0.110	0.253	0.000
	IMPACT (Williams, 2004)	Diabetes	0.219	0.101	0.338	0.000
Random			0.224	0.133	0.315	0.000

Change in HbA1C Levels at 6 Months

Study name	Chronic Medical Condition	Statistics for each study		
		Difference in means	Lower limit	Upper limit
MDDP (Ell, 2010)	Diabetes	-0.07	-0.55	0.41
TEAMcare (Katon, 2010)	Diabetes	0.55	0.03	1.07
IMPACT (Williams, 2004)	Diabetes	0.00	-0.36	0.36
		0.13	-0.22	0.48



Measures of Heterogeneity

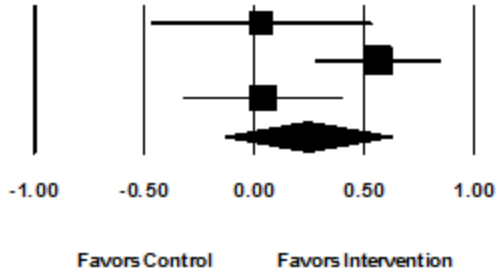
Q-value	df (Q)	P-value	I-squared
3.671	2	0.160	45.524

Change in HbA1C Levels at 6 Months

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**WMD**	**Lower limit**	**Upper limit**	**p-Value**
	MDDP (Ell, 2010)	Diabetes	0.242	-0.293	0.777	0.375
	TEAMcare (Katon, 2010)	Diabetes	-0.026	-0.313	0.262	0.862
	IMPACT (Williams, 2004)	Diabetes	0.231	-0.376	0.838	0.456
Random			0.132	-0.217	0.482	0.458

Change in HbA1C Levels at 12 Months

Study name	Chronic Medical Condition	Difference in means	Lower limit	Upper limit
MDDP (Ell, 2010)	Diabetes	0.03	-0.48	0.54
TEAMcare (Katon, 2010)	Diabetes	0.56	0.27	0.85
IMPACT (Williams, 2004)	Diabetes	0.04	-0.32	0.40
		0.24	-0.14	0.62



Measures of Heterogeneity

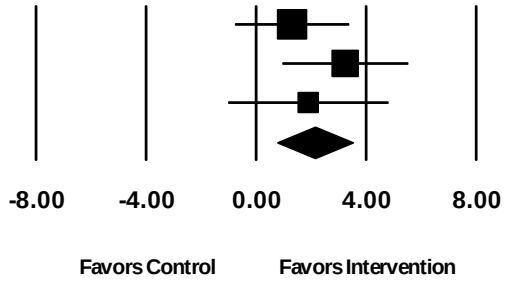
Q-value	df (Q)	P-value	I-squared
6.208	2	0.045	67.785

Change in HbA1C Levels at 12 Months

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**WMD**	**Lower limit**	**Upper limit**	**p-Value**
	MDDP (Ell, 2010)	Diabetes	0.312	-0.197	0.821	0.230
	TEAMcare (Katon, 2010)	Diabetes	0.037	-0.257	0.331	0.807
	IMPACT (Williams, 2004)	Diabetes	0.337	-0.175	0.850	0.197
Random			0.239	-0.143	0.622	0.220

Change in Physical Health Status at 6 Months

Study name	Chronic Medical Condition	Difference in means	Lower limit	Upper limit
ADAPt-C (Ell, 2008)	Cancer	1.31	-0.78	3.40
MDDP (Ell, 2010)	Diabetes	3.24	0.94	5.54
HITIDES (Pyne, 2011)	HIV	1.90	-1.04	4.84
		2.12	0.75	3.49



Notes: Physical health status was measured with the 12-Item Short Form Survey from the RAND Medical Outcomes Study (SF-12) for all trials.

Measures of Heterogeneity

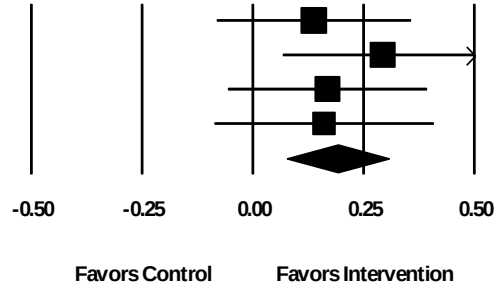
Q-value	df (Q)	P-value	I-squared
1.505	2	0.471	0.000

Change in Physical Health Status at 6 Months - WMD

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**WMD**	**Lower limit**	**Upper limit**	**p-Value**
	ADAPt-C (Ell, 2008)	Cancer	2.729	0.916	4.542	0.003
	MDDP (Ell, 2010)	Diabetes	1.509	-0.195	3.212	0.083
	HITIDES (Pyne, 2011)	HIV	2.212	0.325	4.099	0.022
Random			2.120	0.750	3.490	0.002

Change in Physical Health Status at 6 Months

Studyname	Chronic Medical Condition	Std diff in means	Lower limit	Upper limit
ADAPt-C (Ell, 2008)	Cancer	0.14	-0.08	0.36
MDDP (Ell, 2010)	Diabetes	0.29	0.07	0.52
Bypassing the Blues (Rollman, 2009)	Heart Disease	0.17	-0.06	0.39
HITIDES (Pyne, 2011)	HIV	0.16	-0.09	0.41
		0.19	0.08	0.31



Notes: Physical health status was measured with the 12-Item Short Form Survey from the RAND Medical Outcomes Study (SF-12) for all trials except Bypassing the Blues, which used the SF-36. The Bypassing the Blues data are from the 8-month endpoint.

Measures of Heterogeneity

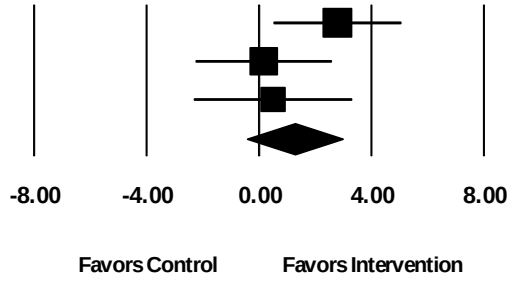
Q-value	df (Q)	P-value	I-squared
1.101	3	0.777	0.000

Change in Physical Health Status at 6 Months - SMD

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**SMD**	**Lower limit**	**Upper limit**	**p-Value**
	ADAPt-C (Ell, 2008)	Cancer	0.210	0.076	0.345	0.002
	MDDP (Ell, 2010)	Diabetes	0.155	0.022	0.288	0.023
	Bypassing the Blues (Rollman, 2009)	Heart Disease	0.198	0.065	0.332	0.004
	HITIDES (Pyne, 2011)	HIV	0.199	0.069	0.328	0.003
Random			0.191	0.076	0.305	0.001

Change in Physical Health Status at 12 Months

Study name	Chronic Medical Condition	Statistics for each study		
		Difference in means	Lower limit	Upper limit
ADAPt-C (Ell, 2008)	Cancer	2.79	0.50	5.08
MDDP (Ell, 2010)	Diabetes	0.17	-2.27	2.61
HITIDES (Pyne, 2011)	HIV	0.50	-2.34	3.34
		1.25	-0.45	2.95



Note: Physical health status was measured with the 12-Item Short Form Survey from the RAND Medical Outcomes Study (SF-12) for all trials.

Measures of Heterogeneity

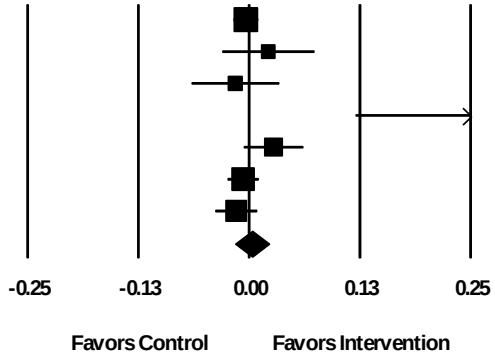
Q-value	df (Q)	P-value	I-squared
2.748	2	0.253	27.212

Change in Physical Health Status at 12 Months - WMD

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**WMD**	**Lower limit**	**Upper limit**	**p-Value**
	ADAPt-C (Ell, 2008)	Cancer	0.311	-1.540	2.162	0.742
	MDDP (Ell, 2010)	Diabetes	1.803	-0.420	4.026	0.112
	HITIDES (Pyne, 2011)	HIV	1.515	-1.052	4.082	0.247
Random			1.251	-0.446	2.948	0.149

Risk of All-Cause Mortality at 6 Months

Study name	Chronic Medical Condition	Statistics for each study		
		Risk difference	Lower limit	Upper limit
IMPACT (Lin, 2003)	Arthritis	-0.00	-0.02	0.01
ADAPt-C (Ell, 2008)	Cancer	0.02	-0.03	0.07
IMPACT (Fann, 2009)	Cancer	-0.02	-0.07	0.03
MDDP (Dwight-Johnson, 2005)	Diabetes	0.30	0.12	0.47
IMPACT (Williams, 2004)	Diabetes	0.03	-0.01	0.06
Bypassing the Blues (Rollman, 2009)	Heart Disease	-0.01	-0.02	0.01
HITIDES (Pyne, 2011)	HIV	-0.01	-0.04	0.01
		0.00	-0.02	0.02



Note: The Bypassing the Blues and MDDP (Dwight-Johnson, 2005) data are from 8-month endpoints.

Measures of Heterogeneity

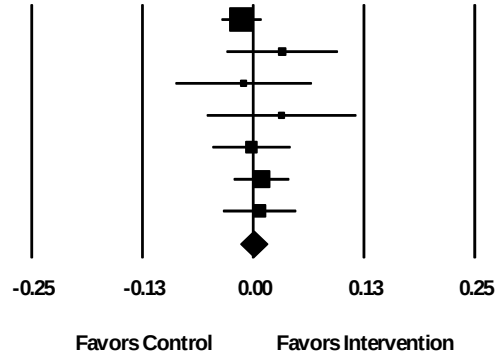
Q-value	df (Q)	P-value	I-squared
16.194	6	0.013	62.949

Risk of All-Cause Mortality at 6 Months

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**RD**	**Lower limit**	**Upper limit**	**p-Value**
	IMPACT (Lin, 2003)	Arthritis	0.008	-0.020	0.035	0.582
	ADAPt-C (Ell, 2008)	Cancer	0.001	-0.019	0.021	0.923
	IMPACT (Fann, 2009)	Cancer	0.005	-0.016	0.026	0.630
	MDDP (Dwight-Johnson, 2005)	Diabetes	-0.003	-0.013	0.007	0.519
	IMPACT (Williams, 2004)	Diabetes	-0.002	-0.022	0.018	0.846
	Bypassing the Blues (Rollman, 2009)	Heart Disease	0.008	-0.018	0.034	0.562
	HITIDES (Pyne, 2011)	HIV	0.008	-0.015	0.031	0.507
Random			0.003	-0.016	0.022	0.785

Risk of All-Cause Mortality at 12 Months

Study name	Chronic Medical Condition	Risk difference	Lower limit	Upper limit
IMPACT (Lin, 2003)	Arthritis	-0.01	-0.04	0.01
ADAPt-C (Ell, 2008)	Cancer	0.03	-0.03	0.10
IMPACT (Fann, 2009)	Cancer	-0.01	-0.09	0.07
SMaRT Oncology 1 (Strong, 2008)	Cancer	0.03	-0.05	0.12
IMPACT (Williams, 2004)	Diabetes	0.00	-0.05	0.04
TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	0.01	-0.02	0.04
HITIDES (Pyne, 2011)	HIV	0.01	-0.03	0.05
		-0.00	-0.02	0.01



Measures of Heterogeneity

Q-value	df (Q)	P-value	I-squared
3.325	6	0.767	0.000

Risk of All-Cause Mortality at 12 Months

			Statistics with study removed			
Model	**Study name**	**Chronic Medical Condition**	**RD**	**Lower limit**	**Upper limit**	**p-Value**
	IMPACT (Lin, 2003)	Arthritis	0.009	-0.011	0.028	0.374
	ADAPt-C (Ell, 2008)	Cancer	-0.002	-0.018	0.013	0.780
	IMPACT (Fann, 2009)	Cancer	0.000	-0.015	0.015	0.983
	SMaRT Oncology 1 (Strong, 2008)	Cancer	-0.001	-0.017	0.014	0.869
	IMPACT (Williams, 2004)	Diabetes	0.000	-0.016	0.016	0.997
	TEAMcare (Katon, 2010)	Diabetes +/- Heart Disease	-0.003	-0.020	0.014	0.732
	HITIDES (Pyne, 2011)	HIV	-0.001	-0.017	0.015	0.870
Random			0.000	-0.015	0.015	0.974

Appendix F. Strength of Evidence

Appendix F. Strength of Evidence

Table F-1. Strength of Evidence for collaborative care interventions for people with depression and one or more chronic medical conditions: KQ1a

Outcome	Number of Studies; Subjects	Risk of bias; Design; Quality	Consistency	Directness	Precision	Summary Effect Size (95% CI)[a]	Strength of Evidence
Symptom improvement	10; 2,659	Low; 8 RCTs, 2 subgroup analyses from an RCT; 3 good, 7 fair	Consistent	Indirect	Precise	6 mths: SMD = 0.45 (0.29 to 0.61) 12 mths: SMD = 0.47 (0.29 to 0.65)	Moderate
Depression-free days	4; 1,237	Low; 2 RCTs, 2 subgroup analyses from an RCT; 1 good, 3 fair	Consistent	Indirect	Imprecise	Not calculated; intervention always favored	Moderate
Response (at least 50% reduction)	10; 3,430	Low; 8 RCTs, 2 subgroup analyses from an RCT; 3 good, 7 fair	Consistent	Indirect	Precise	6 mths: RD = 0.20 (0.14 to 0.26) 12 mths: RD = 0.17 (0.12 to 0.23)	Moderate
Remission	5; 2,351	Low 3 RCTs, 2 subgroup analyses from an RCT; 1 good, 4 fair	Consistent	Indirect	Precise	6 mths: RD = 0.12 (0.06 to 0.18) 12 mths: RD = 0.08 (0.02 to 0.14)	Moderate
Recurrence	0;0	NA	NA	NA	NA	NA	Insufficient
Treatment adherence	2; 605	Low; 2 RCTs; 1 good, 1 fair	Inconsistent	Indirect	Imprecise	Mixed results[b]	Insufficient
Treatment satisfaction	4; 1,145[c]	Low; 3 RCTs, 1 subgroup analysis from an RCT; 4 fair	Consistent	Indirect	Precise	RD = 0.21 (0.11 to 0.30)	Moderate

[a] All of the effect sizes reported in this Table favor collaborative care over controls. Effect sizes and confidence intervals are rounded to the nearest hundredth;

[b] One trial reported significantly greater adherence to antidepressants in the intervention arm at six and 12 months; the other reported no difference between groups at six and 12 months;

[c] Two additional trials reported treatment satisfaction for the intervention arm but not the usual care arm.

Abbreviations: CI, confidence interval; NA, not applicable; RCT, randomized controlled trial; RD, risk difference; SMD, standardized mean difference; WMD, weighted mean difference

Table F-2. Strength of Evidence for collaborative care interventions for people with an anxiety disorder and one or more chronic medical conditions: KQ1a

Outcome	Number of Studies; Subjects	Risk of bias; Design; Quality	Consistency	Directness	Precision	Summary Effect Size (95% CI)	Strength of Evidence
Symptom improvement	0; 0	N/A	N/A	N/A	N/A	N/A	Insufficient
Depression-free days	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient
Response (at least 50% reduction)	0; 0	N/A	N/A	N/A	N/A	N/A	Insufficient
Remission	0; 0	N/A	N/A	N/A	N/A	N/A	Insufficient
Recurrence	0; 0	NA	NA	NA	NA	NA	Insufficient
Treatment adherence	0; 0	N/A	N/A	N/A	N/A	N/A	Insufficient
Treatment satisfaction	0; 0	N/A	N/A	N/A	N/A	N/A	Insufficient

Abbreviations: CI, confidence interval; NA, not applicable

Table F-3. Strength of Evidence for collaborative care interventions for people with depression and one or more chronic medical conditions: KQ 1b

Outcome	Number of Studies; Subjects	Risk of bias; Design; Quality	Consistency	Directness	Precision	Summary effect Size (95% CI)	Strength of Evidence
Suicide	2; 255	Low; 1 RCT; 1 fair	Inconsistent	Direct	Imprecise	Not calculated[a]	Insufficient
Use of anti-depressants	4; 2,020	Low; 2 RCTs, 1 subgroup analysis from an RCT; 2 good, 1 fair	Inconsistent	Direct	Imprecise	6 mths: RD = 0.09 (-0.02 to 0.12) 12 mths: RD = 0.22 (0.13 to 0.32)[b]	Low
MH-related quality of life	5; 1,854	Low; 4 RCTs, 1 subgroup analysis from an RCT; 2 good; 3 fair	Consistent	Direct	Imprecise	6 mths: SMD = 0.31 (0.16 to 0.45) 12 mths: WMD = 2.98 (1.41 to 4.56)	Moderate
MH care utilization	4; 1,782	Low; 2 RCTs, 2 subgroup analyses from an RCT; 1 good; 3 fair	Consistent	Direct	Imprecise	Not calculated	Low
MH-related sick days	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient
MH-related employment stability	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient

Note: IMPACT trial is divided by condition (arthritis, cancer, diabetes) and each condition is considered a "study" in this table.
Abbreviations: CI, confidence interval; MH, mental health; mths, months; N/A, not applicable; RCT, randomized controlled trial; RD, risk difference; SMD, standardized mean difference; WMD, weighted mean difference

[a] One study reported one suicide in the usual care group; another reported that they were unaware of any attempted or completed suicides in either group.

[b] Results of the meta-analysis excluding the HITIDES data

Table F-4. Strength of Evidence for collaborative care interventions for people with anxiety and one or more chronic medical conditions: KQ 1b

Outcome	Number of Studies; Subjects	Risk of bias; Design; Quality	Consistency	Directness	Precision	Summary effect Size (95% CI)	Strength of Evidence
Suicide	0; 0	N/A	N/A	N/A	N/A	N/A	Insufficient
Use of anti-depressants	0; 0	N/A	N/A	N/A	N/A	N/A	Insufficient
MH-related quality of life	0; 0	N/A	N/A	N/A	N/A	N/A	Insufficient
MH care utilization	0; 0	N/A	N/A	N/A	N/A	N/A	Insufficient
MH-related sick days	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient
MH-related employment stability	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient

Abbreviations: CI, confidence interval; MH, mental health; N/A, not applicable

Table F-5. Strength of Evidence for collaborative care interventions for people with depression and one or more chronic medical conditions: KQ 2a

Outcome	Number of Studies; Subjects	Risk of bias; Design; Quality	Consistency	Directness	Precision	Summary effect size (95% CI)	Strength of Evidence
Symptom improvement							
Arthritis: pain	1; 1,001	Medium; 1 subgroup analysis of an RCT; 1 Fair	N/A	Indirect	Imprecise	Change in pain score (0-10 scale, higher = worse) 6 mths: -0.21(-0.6 to 0.19) 12 mths: -0.53 (-0.92 to -0.14)	Insufficient
HIV: symptom severity	1; 276	Low; 1 RCT; 1 Good	N/A	Indirect	Imprecise	6 mths: Beta = -2.6 (-3.5 to -1.8) 12 mths: Beta = -0.9 (-1.58 to 1.40)	Insufficient
Response							
Diabetes: HbA1c	4; 1,347[a]	Medium, 3 RCTs, 1 subgroup analysis of an RCT; 4 Fair	Inconsistent	Indirect	Imprecise	6 mths: WMD = 0.13 (-0.55 to 0.41) 12 mths: WMD = 0.24 (-0.14 to 0.62	Low
Heart disease: ≥ 10 mg Hg decrease in SBP	1; 214[a]	Medium; 1 RCT; 1 Fair	N/A	Indirect	Precise	At 12 mths, 41 intervention subjects vs. 25 controls achieved response (p=0.016)	Insufficient
Adherence							
Cancer: followed treatment	1; 55	Medium; 1 RCT; 1 Fair	N/A	Indirect	Precise	12 mths: OR = 3.51 (0.82 to 15.03)	Insufficient
Diabetes: diet	3; 960[a]	Medium; 2 RCTs, 1 subgroup analysis from an RCT; 3 Fair	Consistent	Indirect	Precise	Not calculated; no between group difference at any time points in all studies examined	Moderate
Diabetes: exercise	3; 960[a]	Medium; 2 RCTs, 1 subgroup analysis from an RCT; 3 Fair	Inconsistent	Indirect	Imprecise	Not calculated; 2 studies favored intervention, 1 study found no difference	Low

Outcome	Number of Studies; Subjects	Risk of bias; Design; Quality	Consistency	Directness	Precision	Summary effect size (95% CI)	Strength of Evidence
Diabetes: medications	2; 746	Medium; 1 RCT, 1 subgroup analysis from an RCT; 2 Fair	Inconsistent	Indirect	Imprecise	Not calculated; 1 study found no difference in adherence to lipid-lowering agents or ACE inhibitors but a higher rate of non-adherence to oral hypoglycemics in the intervention group at 12 mths; the other found no difference in general medication adherence at any time point.	Insufficient
HIV: medications	1; 276	Low; 1 RCT; 1 Good	N/A	Indirect	Imprecise	Not calculated; no between-group differences at 6 and 12 months	Insufficient
Satisfaction with care							
Diabetes, heart disease or both	1; 214	Medium; 1 RCT; 1 Fair	N/A	Indirect	Imprecise	Mean improvement from baseline was 16% in the intervention vs. 2% in control (p<0.001)	Insufficient

Note: IMPACT trial is divided by condition (arthritis, cancer, diabetes) and each condition is considered a "study" in this table.

[a] Total number includes patients from the TEAMcare study who had diabetes, heart disease, or both.

Abbreviations: CI, confidence interval; N/A, not applicable; OR, odds ratio; RCT, randomized controlled trial; RD, risk difference; SMD, standardized mean difference; WMD, weighted mean difference

Table F-6. Strength of Evidence for collaborative care interventions for people with anxiety and one or more chronic medical conditions: KQ 2a

Outcome	Number of Studies; Subjects	Risk of bias; Design; Quality	Consistency	Directness	Precision	Summary effect Size (95% CI)	Strength of Evidence
Symptom improvement	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient
Response	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient
Adherence	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient
Satisfaction with care	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient

Abbreviations: CI, confidence interval; MH, mental health; N/A, not applicable

Table F-7. Strength of Evidence for collaborative care interventions for people with depression and one or more chronic medical conditions: KQ 2b, general health outcomes and costs

Outcome	Number of Studies; Subjects	Risk of bias; Design; Quality	Consistency	Directness	Precision	Summary effect Size (95% CI)	Strength of Evidence
Condition-specific morbidity	2; 1,303	Medium; 1 RCT, 1 subgroup analysis from an RCT; 1 Good, 1 Fair	Inconsistent	Direct	Imprecise	Not calculated	Insufficient
Mortality	10; 3,481	Low; 7 RCTs, 3 subgroup analyses from an RCT; 2 Good; 8 Fair	Consistent	Direct	Precise	6 mths: RD = 0.00 (-0.02 to 0.02) 12 mths: RD = 0.00 (0.02 to 0.01)	Moderate
Health care utilization	2; 516	Low; 2 RCTs; 1 Good; 1 Fair	Inconsistent	Direct	Imprecise	Not calculated	Insufficient
Quality of life	6; 2,768	Medium; 3 RCTs, 3 sungroup analyses from an RCT; 1 Good, 5 Fair	Consistent	Direct	Imprecise	Not calculated;[a] Intervention favored across measures.	Moderate
Cost of intervention	6; 2,019	High; 5 RCT, 1 subgroup analysis from an RCT; 6 Fair	N/A	Direct	N/A	$542 per patient per year[b]	Insufficient

Note: IMPACT trial is divided by condition (arthritis, cancer, diabetes) and each condition is considered a "study" in this table.

[a] Not calculated because of highly variable measures used by the studies to measure quality of life.

[b] Based on the 4 studies that reported costs in the same way.

Abbreviations: CI, confidence interval; mths, months; RD, risk difference; WMD, weighted mean difference

Table F-8. Strength of Evidence for collaborative care interventions for people with anxiety and one or more chronic medical conditions: KQ 2b, general health outcomes and costs

Outcome	Number of Studies; Subjects	Risk of bias; Design; Quality	Consistency	Directness	Precision	Summary effect Size (95% CI)	Strength of Evidence
Condition-specific morbidity	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient
Mortality	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient
Health care utilization	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient
Quality of life	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient
Costs	0;0	N/A	N/A	N/A	N/A	N/A	Insufficient

Abbreviations: CI, confidence interval; MH, mental health; N/A, not applicable